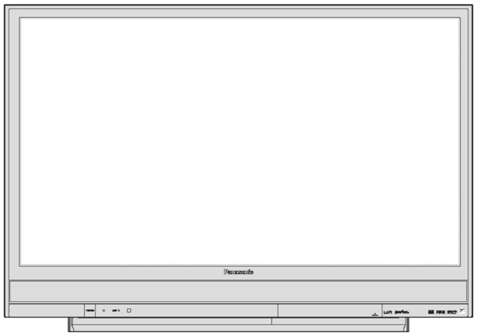
ORDER NO. MKE0706850CE

Service Manual

Multi Media Display



PbF
Solder Lead free

PT-56LCX70
PT-61LCX70
PT-50LCX7
PT-56LCX7
PT-61LCX7

PT-50LCX7K
PT-56LCX70-K
PT-61LCX70-K

Vol. 1

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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1 Safety Precautions

1.1. General Guidelines

1. For continued safety, no modification of any circuit should be attempted.
2. Disconnect AC Plug before disassembling this unit.
3. It is advisable to use an isolation transformer in the AC supply before servicing.
4. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
5. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers, shield, and isolation R-C combinations etc. are properly installed.
6. After servicing, be sure to restore the wires, leads, insulation barriers, shields, etc.
7. After servicing, make the leakage current checks to prevent the customer from being exposed to shock hazards.

Caution:

Use a separate Isolation Transformer for this unit when servicing.

1.2. Leakage Current Cold Check

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. For physically operated power switches, turn power on. Otherwise skip step 2.
3. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the receiver, such as screwheads, connectors, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1 MΩ and 12 MΩ. When the exposed metal does not have a return path to the chassis, the reading must be infinity.

1.3. Leakage Current Hot Check

1. Plug the AC cord directly into the AC outlet.

   Do not use an isolation transformer for this check.
2. Connect "A" to exposed metallic part on the set. And connect "B" to a good earth ground, as shown in Figure 1.
3. Use an AC voltmeter, with 1 kΩ/V or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.25 V RMS.

   A leakage current tester (Simpson Model 228 equivalent) may be used to make the hot checks. Leakage current must not exceed 1/2 mA. In case a measurement is outside of the limits specified, there is a possibility of shock hazard, and the receiver should be repaired and rechecked before it is returned to the customer.

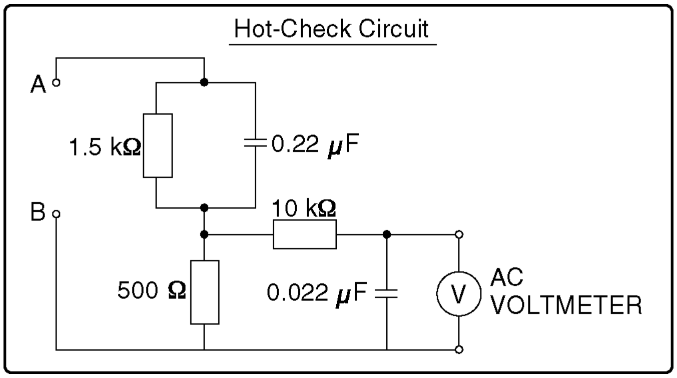


Figure 1

1.4. Disposal Lamp

This Projection Display TV has a Electrodeless Discharge Lamp that contains mercury.
Disposal may be regulated in your community due to environmental considerations.
For disposal or recycling information, please contact your local authorities, or the Electronics Industries Alliance: <http://www.eiae.org>

2 Warning

2.1. Prevention of Electro Static Discharge (ESD) to Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electro static discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an antistatic solder removal device. Some solder removal devices not classified as "antistatic (ESD protected)" can generate electrical charge sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

   CAUTION :

   Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

3 Service Navigation

3.1. Introduction

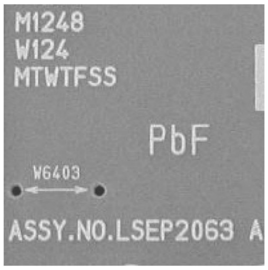
This service manual contains technical information which will allow service personnel´s to understand and service this model. Please place orders using the parts list and not the drawing reference numbers.

If the circuit is changed or modified, this information will be followed by supplement service manual to be filed with original service manual.

3.2. About Lead Free Solder (PbF)

Distinction of PbF PCB:

PCBs (manufactured) using lead free solder will have a PbF printing on the PCB.
(Please refer to figures.)



Printed case

CAUTION:

- **Pb free solder has a higher melting point than standard solder;**
  Typically the melting point is 50 °F - 70 °F (30 °C - 40 °C) higher.
  Please use a soldering iron with temperature control and adjust it to 700 °F±20 °F (370 °C± 10 °C).
  In case of using high temperature soldering iron, please be carefull not to heat too long.
- **Pb free solder will tend to splash when heated too high (about 1100 °F/600 °C).**
- **All products with the printed circuit board with PbF stamp or printing must be serviced with lead free solder.**
  When soldering or unsoldering, completely remove all of the solder from the pins or solder area, and be sure to heat the soldering points with the lead free solder until it melts sufficiently.

Recommendations

Recommended lead free solder composition is Sn96.5 Ag3.0 Cu0.5.

4 Specifications

ITEM		SPECIFICATION	1	2	3
Power Source		AC 120 V, 60 Hz	○	○	○
Power Consumption		Power ON: Approx. 360 W Power OFF: Approx. 0.4 W (When cooling fan is stopped)	○	○	○
LCD panels		0.7″ Poly silicon TFT LCD panel × 3 921 600 (1 280 × 720) stripe pixels × 3 panels (16:9)	○	○	○
Display		52-inch, 16 : 9 aspect ratio	○	–	–
		56-inch, 16 : 9 aspect ratio	–	○	–
		61-inch, 16 : 9 aspect ratio	–	–	○
Speaker		2 Speakers 20 W [10 W + 10 W] (10 % THD)	○	○	○
Light Source		LUXIM® LIFI™ Electrodeless RF Lamp (LFS4000)	○	○	○
Channel Capability (Digital/Analog)		VHF/UHF 2-69 Cable 1-135	○	○	○
Input Terminals	PC INPUT	RGB analog 0.7 Vp-p (75 Ω) (D-SUB 15P) AUDIO 0.5 Vrms (M3 Stereo mini Pin Jack)	○	○	○
	AV INPUT 1-3	VIDEO 1.0 Vp-p (75 Ω) (RCA Pin Jack) S-VIDEO Y: 1 Vp-p (75 Ω), C: 0.286 Vp-p (75 Ω) (Mini DIN 4 pin) AUDIO L-R 0.5 Vrms (RCA Pin Jack × 2)	○	○	○
	COMPONENT VIDEO INPUT 1-2	Y 1.0 Vp-p (with sync) (75 Ω) (Pin Jack) P_B / P_R ± 0.35 Vp-p (75 Ω) (Pin Jack × 2) AUDIO L-R 0.5 Vrms (RCA Pin Jack × 2)	○	○	○
	HDMI 1-3	HDMI type A Connector · This Projection Display supports “HDAVI Control 2” function. AUDIO L-R 0.5 Vrms (RCA Pin Jack Type × 2)	○	○	○
Card slot		SD CARD slot × 1	○	○	○
Output signals (AV OUT)		VIDEO 1.0 Vp-p (75 Ω) (RCA Pin Jack) AUDIO L-R 0.5 Vrms (RCA Pin Jack × 2)	○	○	○
Dimensions (W × H × D)		1 192 mm (W) × 836 mm (H) × 418 mm (D) 46.9″ (W) × 32.9″ (H) × 16.5″ (D)	○	–	–
		1 322 mm (W) × 923 mm (H) × 451 mm (D) 52″ (W) × 36.3″ (H) × 17.8″ (D)	–	○	–
		1 432 mm (W) × 996 mm (H) × 483 mm (D) 56.4″ (W) × 39.2″ (H) × 19″ (D)	–	–	○
Weight (Mass)		27 kg (59.5 lbs.) Net	○	–	–
		32 kg (70.5 lbs.) Net	–	○	–
		34 kg (74.9 lbs.) Net	–	–	○
Operating conditions		Temperature : 0 °C – 35 °C (32 °F - 95 °F) Humidity : 20 % – 80 % (non-condensing)	○	○	○
Solder		**This model uses lead free solder (PbF).**	○	○	○

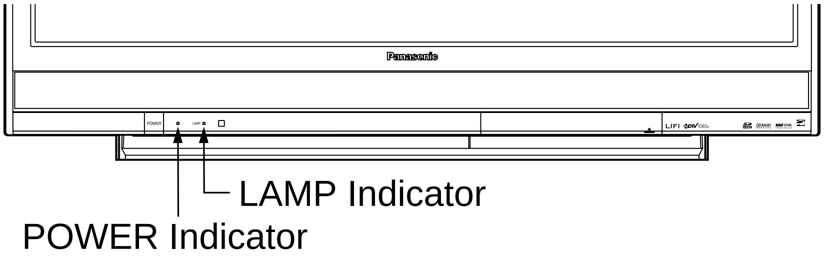
1. PT-50LCX7/PT-50LCX7K
2. PT-56LCX70/PT-56LCX7/PT-56LCX70-K
3. PT-61LCX70/PT-61LCX7/PT-61LCX70-K

Design and Specifications are subject to change without notice.
Weight and Dimensions shown are approximate.

5 Service Mode

INDICATIONS FOR ERROR CONDITIONS

Each Indicator facilitates finding the cause of an error.
When an error is detected, the Lamp goes off and the indicators on the front flash.



(Note 1)

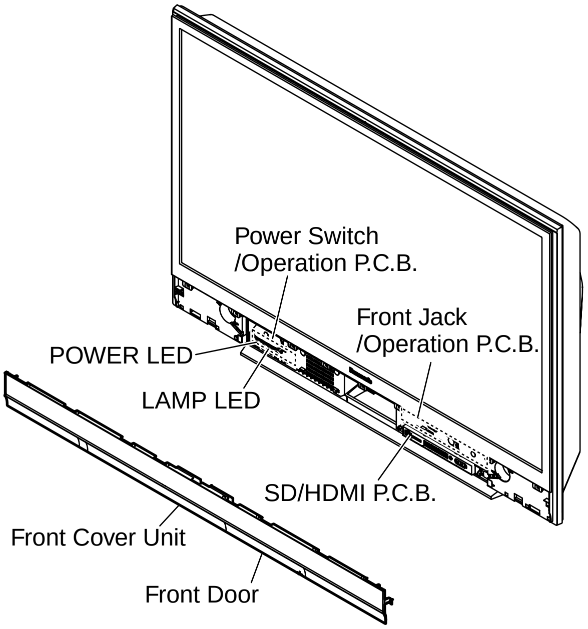
Priority	Error Information	POWER Indicator flashes orange	LAMP Indicator flashes red	SOS	LAMP OFF	RESET
1	**Over voltage/Over current (SOS)**	1	-	01	○	**AC ON/OFF**
2	**Abnormal voltage (DTV+9V line)**	2	-	02	○	
3	**Abnormal voltage (SUB+5V line)**	3	-	03	○	
4	**Abnormal voltage (MAIN+3.3V line)**	4	-	04	○	
5	**IC4501 (Audio Amp) failure**	6	-	06	○	
6	**Communication error between Peaks (IC8001) and TV Microcontroller (IC6004)**	7	-	07	○	
7	**Communication error between Peaks (IC8001) and TV Microcontroller (IC6004)**	9	-	09	○	
8	**Abnormal voltage (POWER+17V line)**	10	-	0A	○	
13	**Lamp does not light up**	-	2	02	○	**Power ON/OFF**
10	**Lamp failure**	-	3	03	○	
11	**Abnormal Lamp temperature**	-	4	04	○	
12	**Lamp communication error**	-	5	05	○ (Note 2)	
15	**Lamp Fan stops**	-	8	08	○	**AC ON/OFF**
16	**Fan Case Unit (OPT Fan) stops**	-	9	09	○	
17	**Front Fan or Rear Fan stops**	-	10	0A	○	
18	**Rear Fan or Front Fan stops**	-	11	0B	○	
14	**Rear Jack PCB connection error**	-	12	0C	○	
9	**Abnormal Lamp input voltage (+28V)**	-	13	0D	○	**Power ON/OFF**

Note:

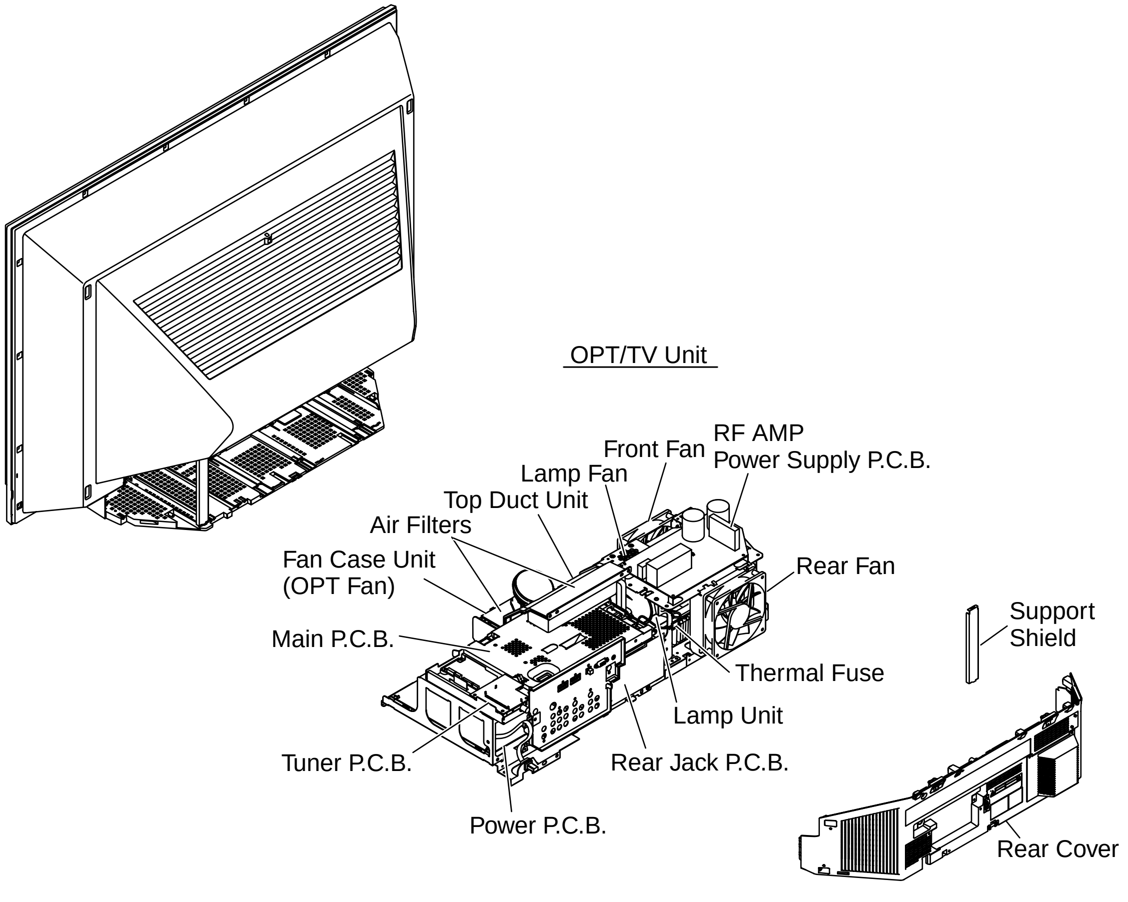
1. The detected Error data will be stored in the EEPROM, and SOS History (Code) is displayed in Self Check mode or Service Adjust mode (SRV-TOOL).
2. The Lamp Indicator will flash X5 immediately after the Lamp goes off. For this SOS only, the TV power will remain on.

MAIN PARTS LOCATION

<Front View>


Power Switch
/Operation P.C.B.
Front Jack
/Operation P.C.B.
POWER LED
LAMP LED
SD/HDMI P.C.B.
Front Cover Unit
Front Door

<Rear View>


OPT/TV Unit
Front Fan
RF AMP
Power Supply P.C.B.
Lamp Fan
Top Duct Unit
Air Filters
Fan Case Unit
(OPT Fan)
Rear Fan
Support
Shield
Main P.C.B.
Thermal Fuse
Lamp Unit
Tuner P.C.B.
Rear Jack P.C.B.
Power P.C.B.
Rear Cover

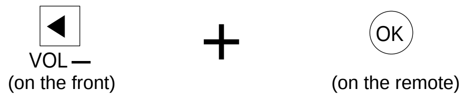
SELF CHECK

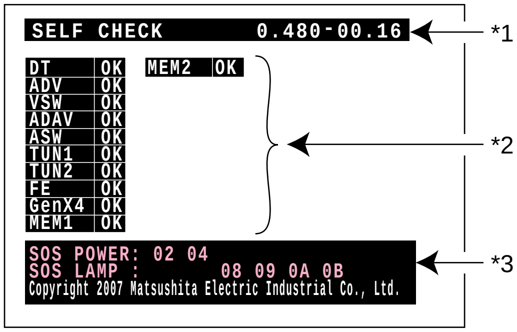
In this mode, the following information can be confirmed on the screen:

- Peaks software version and EEPROM data version
- Communication check between Peaks IC and each ICs
- SOS History

Self Check

Enter:
VOLUME DOWN button + OK key
(for more than 3 seconds in power on condition)


VOL –
(on the front)
+
OK
(on the remote)



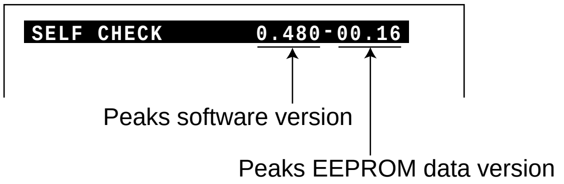
```
SELF CHECK          0.480-00.16
DT     OK   MEM2  OK
ADV    OK
VSW    OK
ADAV   OK
ASW    OK
TUN1   OK
TUN2   OK
FE     OK
GenX4  OK
MEM1   OK
SOS POWER: 02 04
SOS LAMP :         08 09 0A 0B
Copyright 2007 Matsushita Electric Industrial Co., Ltd.
```

<Self Check>

Exit:
Unplug the AC cord.

Fig. 1-1

*1. Peaks software version and Peaks EEPROM data version



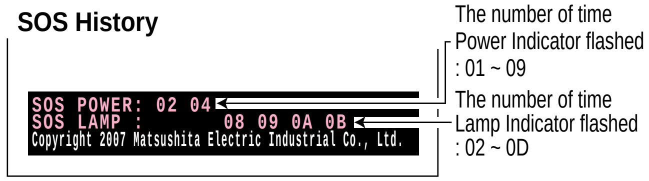
```
SELF CHECK          0.480-00.16
```

Peaks software version
Peaks EEPROM data version

*2. Communication check results (OK or NG) between Peaks IC8001 and each of the following ICs.

(Communication check for I²C bus)		
Display Item	ICs	Description
DT	IC8001	PEAKS internal check
ADV	IC5510	AD/HDMI Interface
VSW	IC3001	Video SW
ADAV	IC4001	Audio DSP
ASW	IC4101	Audio SW
TUN1	TU8201	Tuner PLL block
TUN2	TU8201	Tuner MTS block
FE	IC8802	Demodulator
GenX 4	IC6004	TV Microcontroller
MEM1	IC6005	GenX4 EEPROM
MEM2	IC8201	Peaks EEPROM

*3. SOS History



SOS History

```
SOS POWER: 02 04
SOS LAMP :         08 09 0A 0B
Copyright 2007 Matsushita Electric Industrial Co., Ltd.
```

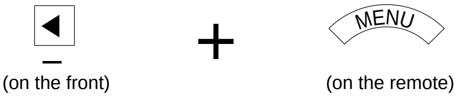
The number of time
Power Indicator flashed
: 01 ~ 09
The number of time
Lamp Indicator flashed
: 02 ~ 0D

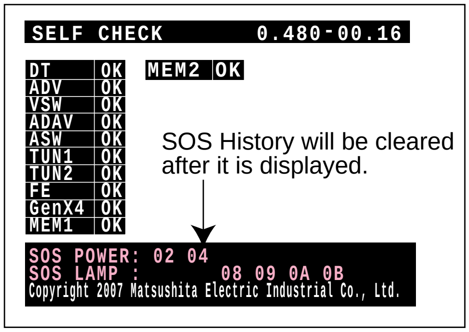
Note:
If the same SOS error occurs more than once, only one code will be displayed.

To clear SOS History, use the following Self Check-2 mode.
The SOS History and all memory function will be reset by Self Check-2.

Self Check-2

Enter:
VOLUME DOWN button + MENU key
(for more than 3 seconds in power on condition)


–
(on the front)
+
MENU
(on the remote)



```
SELF CHECK          0.480-00.16
DT     OK   MEM2  OK
ADV    OK
VSW    OK
ADAV   OK
ASW    OK
TUN1   OK
TUN2   OK
FE     OK
GenX4  OK
MEM1   OK
SOS POWER: 02 04
SOS LAMP :         08 09 0A 0B
Copyright 2007 Matsushita Electric Industrial Co., Ltd.
```

SOS History will be cleared after it is displayed.

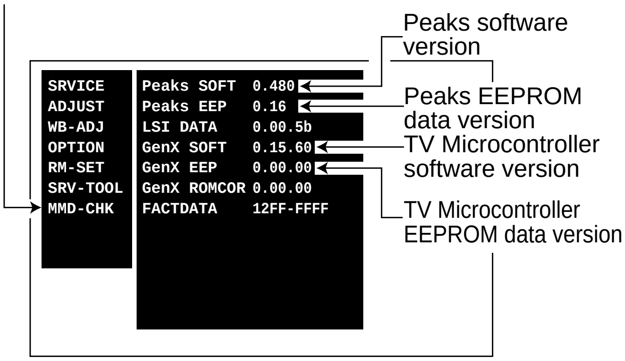
<Self Check-2>

Exit:
Unplug the AC cord.

SERVICE ADJUST MODE

In this mode, the following information can be confirmed on the screen:

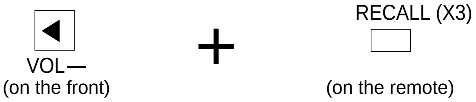
MMD-CHK
- Focus, Tilt, H/V Picture Position adjustment
- Internal pattern for LCD-CHK, GC-CHK

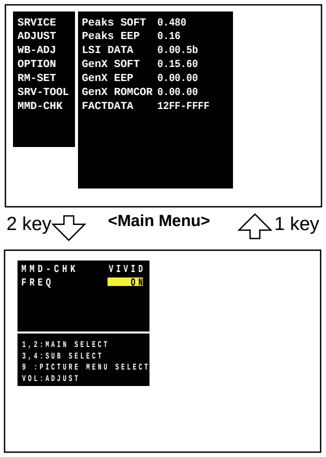

SRVICE
ADJUST
WB-ADJ
OPTION
RM-SET
SRV-TOOL
MMD-CHK
Peaks SOFT 0.480
Peaks EEP 0.16
LSI DATA 0.00.5b
GenX SOFT 0.15.60
GenX EEP 0.00.00
GenX ROMCOR 0.00.00
FACTDATA 12FF-FFFF
Peaks software version
Peaks EEPROM data version
TV Microcontroller software version
TV Microcontroller EEPROM data version

<Main Menu>

Service Adjust Mode

Enter:
VOLUME DOWN button + RECALL key (3 times)
(in power on condition)


RECALL (X3)
VOL–
(on the front)
(on the remote)


SRVICE
ADJUST
WB-ADJ
OPTION
RM-SET
SRV-TOOL
MMD-CHK
Peaks SOFT 0.480
Peaks EEP 0.16
LSI DATA 0.00.5b
GenX SOFT 0.15.60
GenX EEP 0.00.00
GenX ROMCOR 0.00.00
FACTDATA 12FF-FFFF
2 key
<Main Menu>
1 key
MMD-CHK VIVID
FREQ ON
1,2:MAIN SELECT
3,4:SUB SELECT
9 :PICTURE MENU SELECT
VOL:ADJUST

<MMD-CHK 1/8>

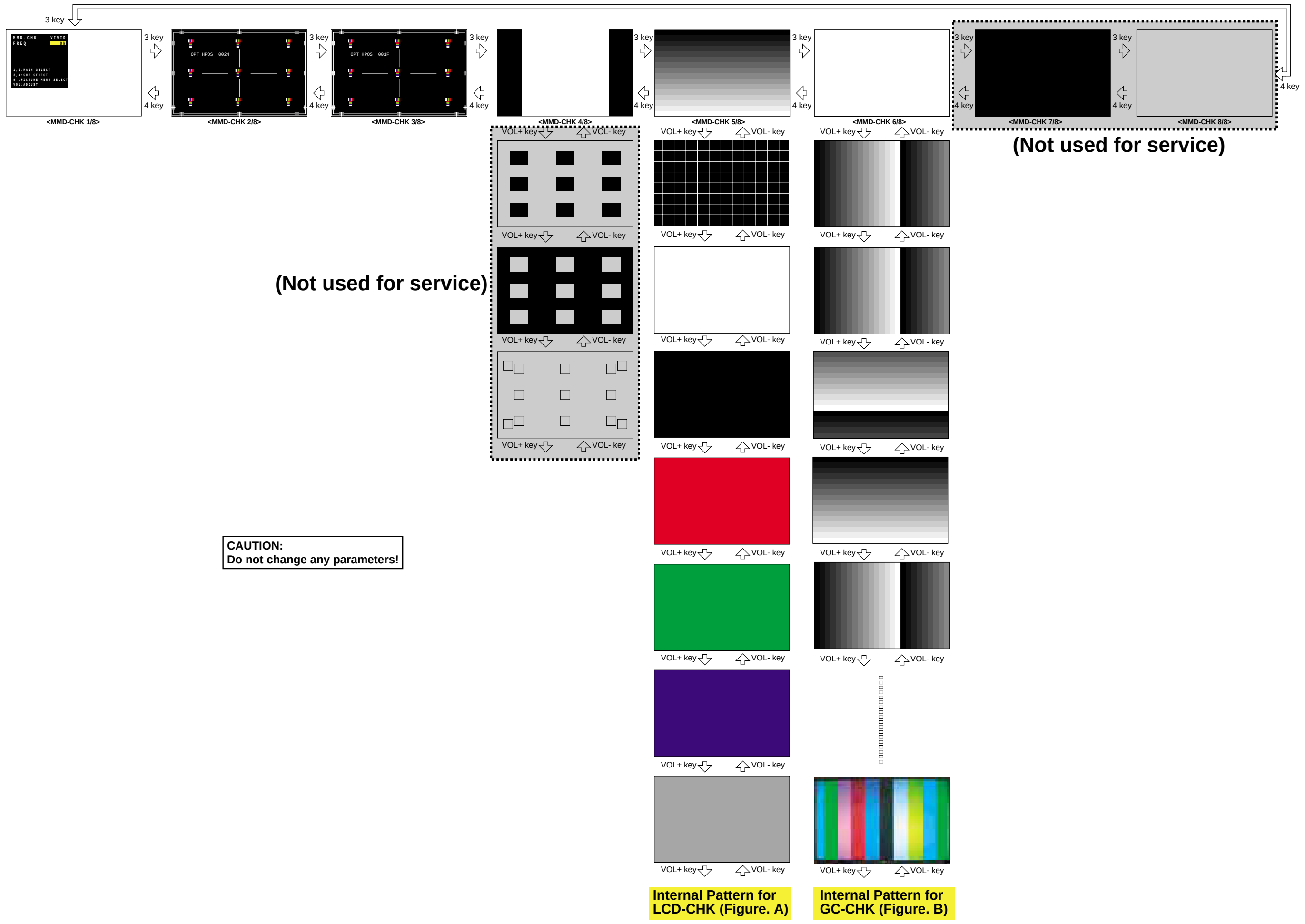
CAUTION:
Do not change any parameters!

Exit from Main Menu:
Power OFF.

Fig. 2-1

MMD-CHK 1/8~8/8 and internal pattern

Perform the Picture Position adjustment by pressing VOL+/- key, and display the internal pattern for LCD-CHK, GC-CHK.


3 key
4 key
<MMD-CHK 1/8>
<MMD-CHK 2/8>
<MMD-CHK 3/8>
<MMD-CHK 4/8>
<MMD-CHK 5/8>
<MMD-CHK 6/8>
<MMD-CHK 7/8>
<MMD-CHK 8/8>
VOL+ key
VOL- key
(Not used for service)
(Not used for service)

CAUTION:
Do not change any parameters!

Internal Pattern for LCD-CHK (Figure. A)

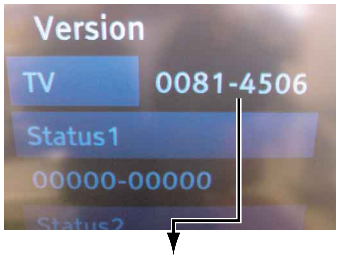
Internal Pattern for GC-CHK (Figure. B)

Note:

Press 1 key to return Main Menu.

TO READ THE PEAKS SOFTWARE VERSION AND TV MICROCONTROLLER SOFTWARE VERSION

1. Press MENU key with the power on.
2. Press CH UP/DOWN key and select "Setup." Then press OK key.
3. Press CH UP/DOWN key and select "About." Then press OK key.
4. Select "Version" and press OK key. Version menu will appear as shown below.



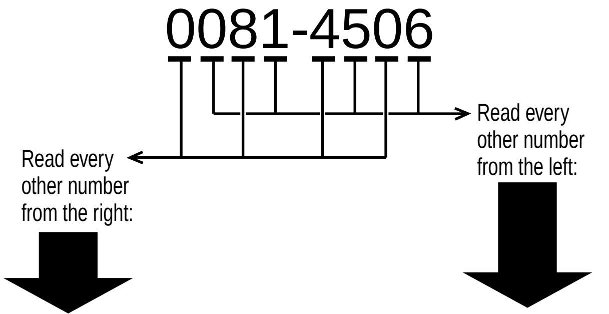
Version

TV 0081-4506

Status1

00000-00000

Status2


0081-4506
Read every other number from the left:
Read every other number from the right:

Peaks software Ver. : 0.480

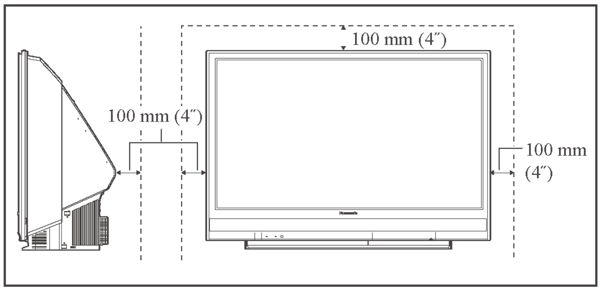
TV Microcontroller software Ver. : 0.156

INSTALLATION DIMENSIONS DIAGRAM

Installation Dimensions Diagram

⚠ CAUTION

Keep the unit at least 100 mm (4˝) away from the wall to provide proper ventilation because warm air is discharged. Blocking the ventilation opening of the cooling fan may damage the unit.



LAMP CAUTION

The Lamp Unit becomes very hot during operation. When replacing the Lamp Unit, wait until it has cooled off (1 hour or more).

TOP DUCT UNIT NOTE

The optical parts will be exposed to the dust in the air when the Top Duct Unit is removed. Therefore, it is strongly recommend to remove the Top Duct Unit only in a clean room.

RESET USER’S MEMORY FUNCTIONS

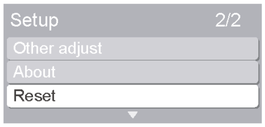
Be sure to reset the user’s memory:
- After replacing the Main P.C.B.
- When moving the unit to a new location.

Reset

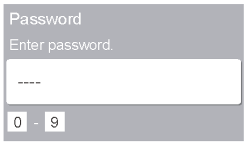
Setup is reset.

Procedure

1. **Press ▲▼ to select “Reset”.**
2. **Press OK to display the password screen.**



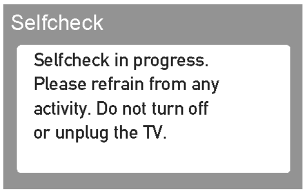
3. **Enter your password by pressing the NUMBER keys to reset the Setup settings.**



4. **The confirmation screen is displayed. Select “Yes”, and press OK.**

Notes

- Performing Reset will clear all items set with Setup, such as channel settings. Use Reset with care.
- POWER indicator flashes red. After flashing stops, unplug the unit then plug it back in and turn power ON.
- When using “EZ Sync™ “HDAVI Control™””, with the device connected, set “EZ Sync” first to “Off” and then “On” using the Setup Menu.



Selfcheck in progress. Please refrain from any activity. Do not turn off or unplug the TV.

After the above message indication disappeared, unplug the unit then plug it back in and turn power ON.

Fig. 4

Note:
SOS History will not be cleared in this function. To clear, use Self Check-2 mode.

DO NOT UNPLUG AC CORD DURING COOLING OPERATION

The lamp cooling fan will continue to operate for approximately 30 seconds after the power is turned off.
At the same time, the POWER LED will flash red.
Do not disconnect the AC Cord from the power outlet and do not open any circuit breakers while the cooling fan is still operating.

HOT CIRCUIT

Primary circuit exists on the Power P.C.B.
This circuit is identified as "**HOT**" on the P.C.B. and in the Service Manual. Use extreme care to prevent accidental shock when servicing.

MODEL NO. IDENTIFICATION MARK

Use Marks shown in the chart below to distinguish the different models included in this Service Manual.

MODEL	MARK
PT-56LCX70	A
PT-61LCX70	B
PT-50LCX7	C
PT-56LCX7	D
PT-61LCX7	E
PT-50LCX7K	F
PT-56LCX70-K	G
PT-61LCX70-K	H
NOT USED	PT

Note:
Refer to Item 3 of Schematic Diagram Notes of Schematic Diagram and Circuit Board Layout Notes, for mark "PT."

WIRE AND LEAD POSITION DIAGRAM OF THE UNIT

After servicing, make sure that all wires, leads, and clampers are placed in their original position. It is important for the best operation of the unit.
Note: Use extreme care especially for the following.

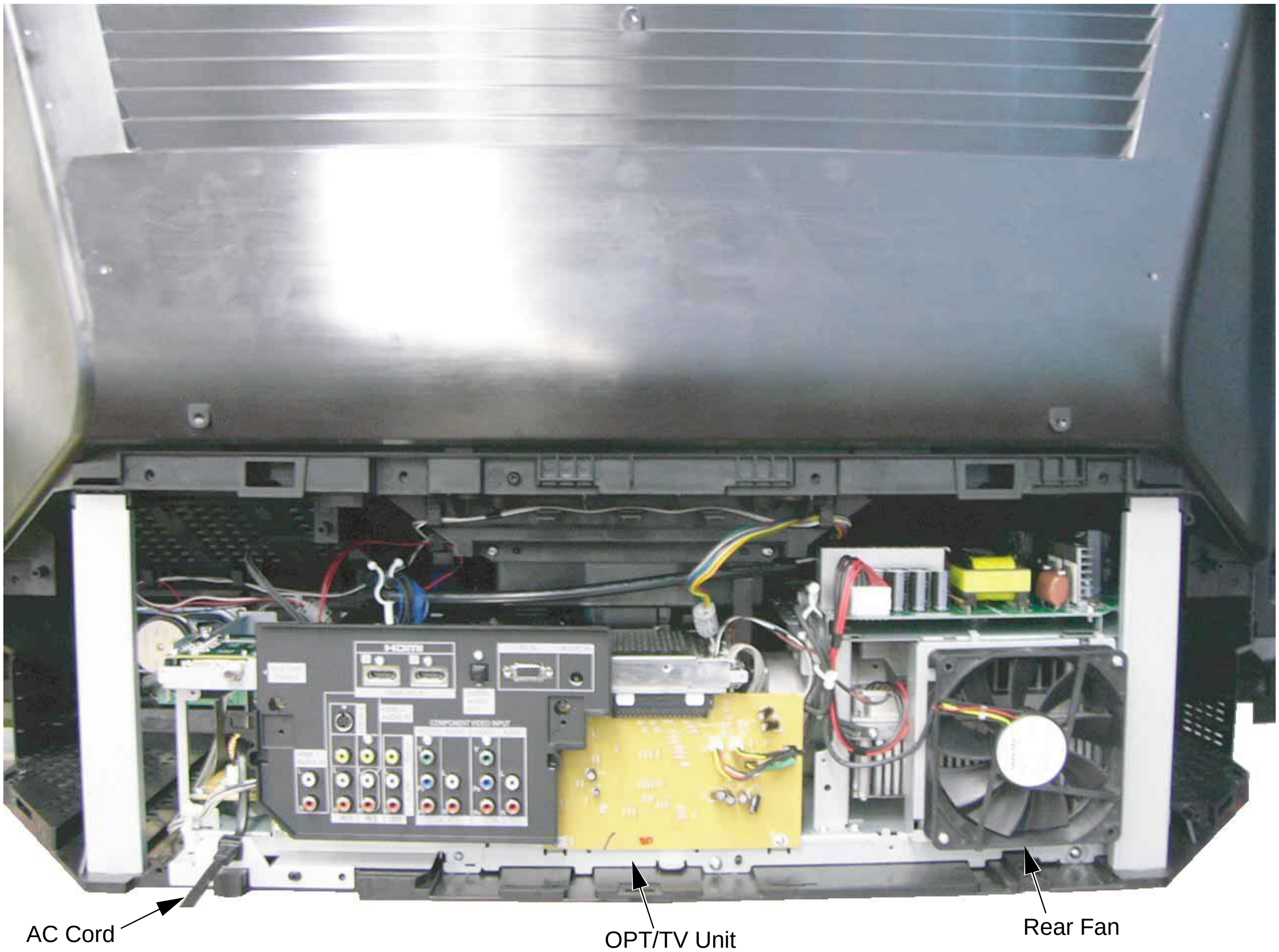


Fig. 9-1

After servicing, make sure that all wires, leads, and clampers are placed in their original position. It is important for the best operation of the unit.

Note: Use extreme care especially for the following.

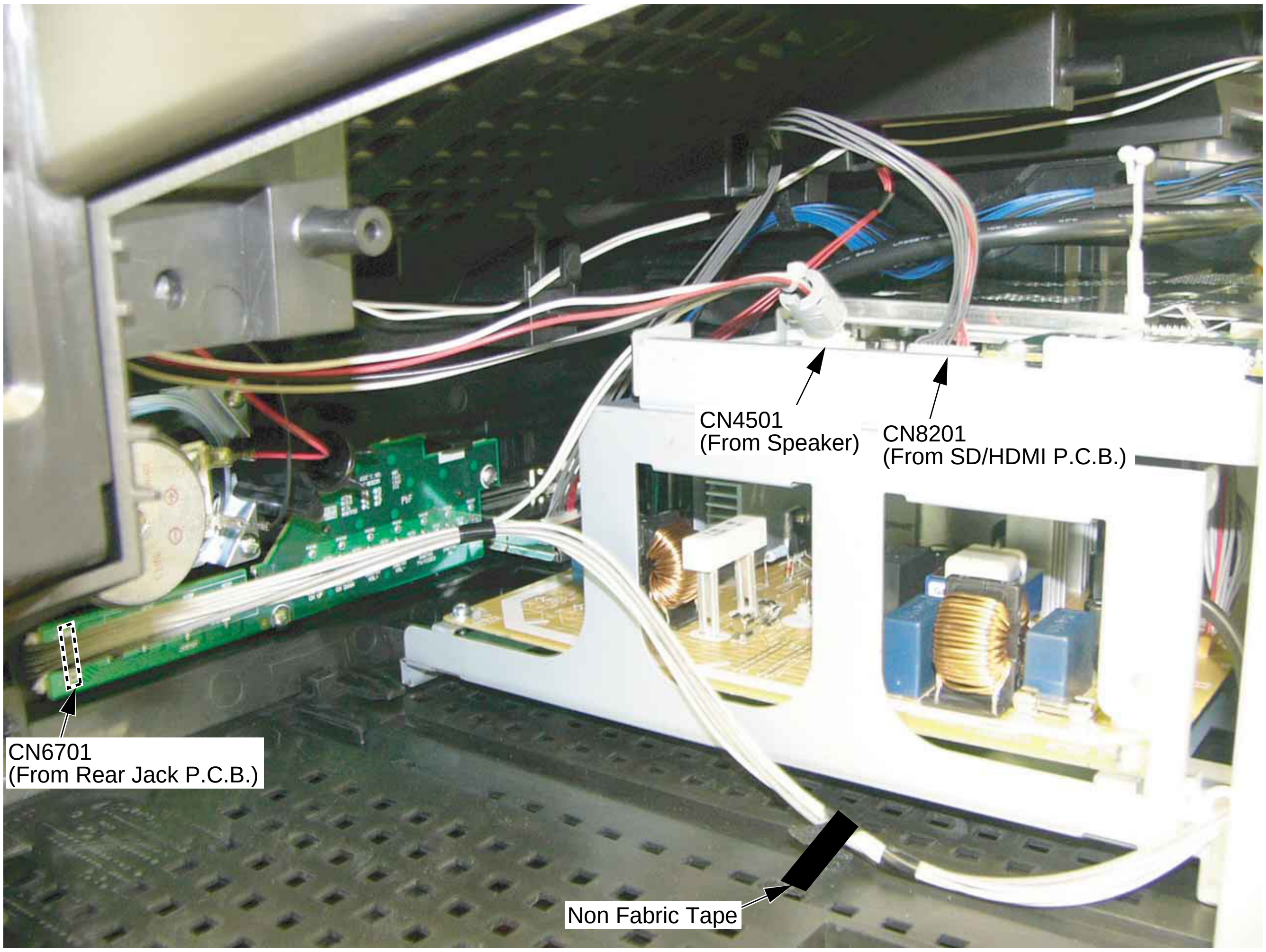
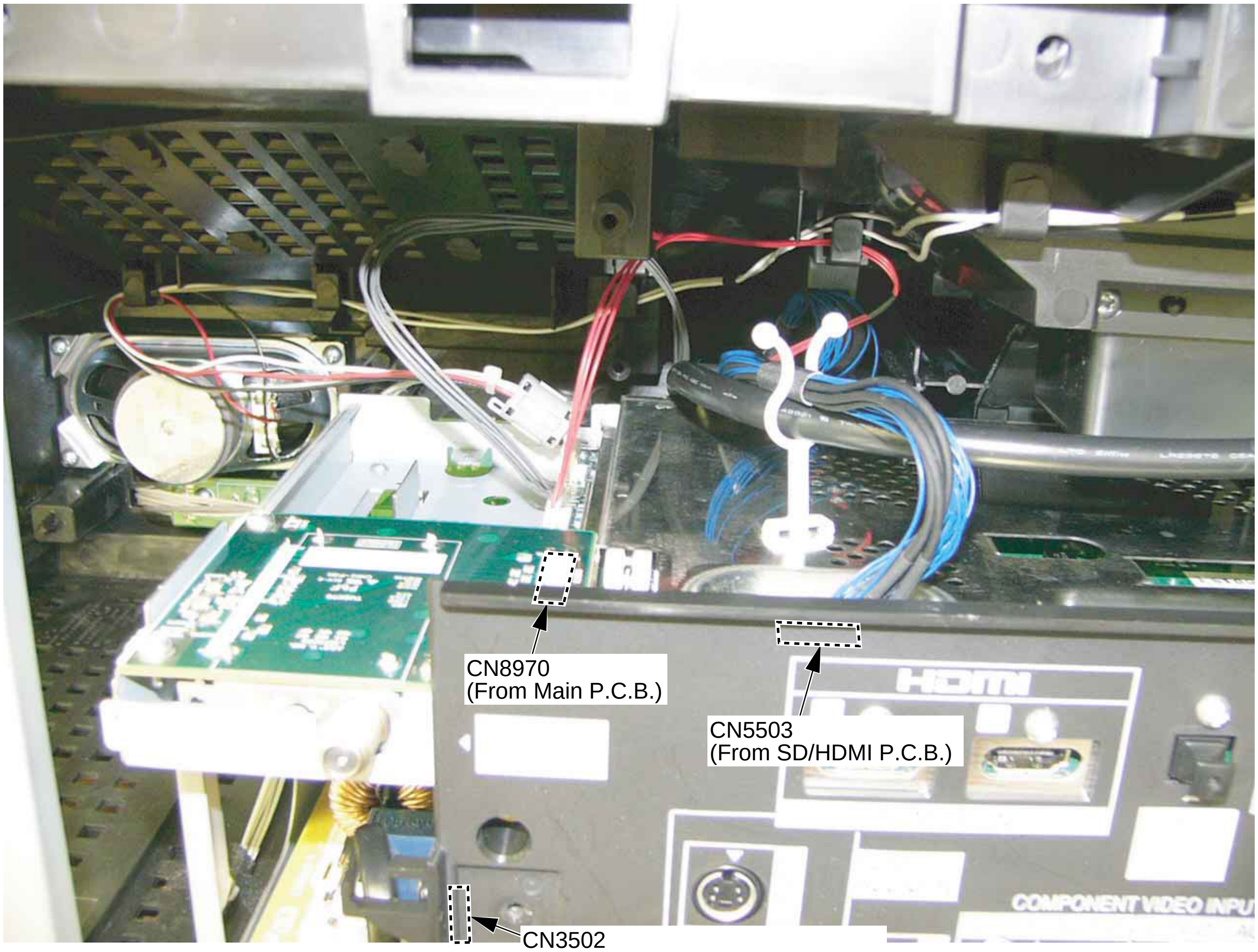

CN4501
(From Speaker)
CN8201
(From SD/HDMI P.C.B.)
CN6701
(From Rear Jack P.C.B.)
Non Fabric Tape

Fig. 9-2

After servicing, make sure that all wires, leads, and clampers are placed in their original position. It is important for the best operation of the unit.

Note: Use extreme care especially for the following.



CN8970
(From Main P.C.B.)

CN5503
(From SD/HDMI P.C.B.)

CN3502
(From Front Jack/Operation P.C.B.)

Fig. 9-3

After servicing, make sure that all wires, leads, and clampers are placed in their original position. It is important for the best operation of the unit.

Note: Use extreme care especially for the following.

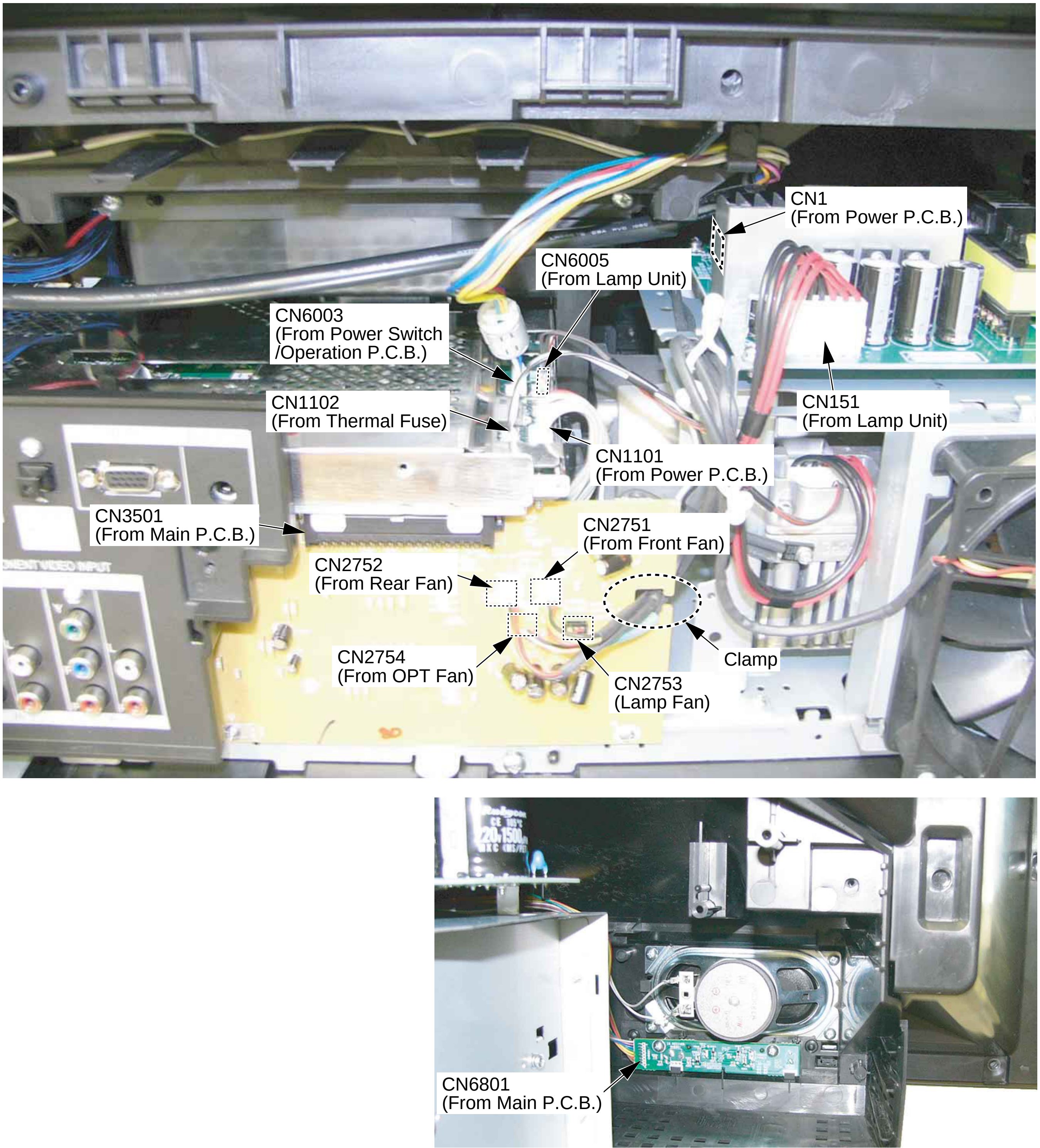

CN1
(From Power P.C.B.)
CN6005
(From Lamp Unit)
CN6003
(From Power Switch
/Operation P.C.B.)
CN151
(From Lamp Unit)
CN1102
(From Thermal Fuse)
CN1101
(From Power P.C.B.)
CN3501
(From Main P.C.B.)
CN2751
(From Front Fan)
CN2752
(From Rear Fan)
Clamp
CN2754
(From OPT Fan)
CN2753
(Lamp Fan)
CN6801
(From Main P.C.B.)

Fig. 9-4

After servicing, make sure that all wires, leads, and clampers are placed in their original position. It is important for the best operation of the unit.

Note: Use extreme care especially for the following.

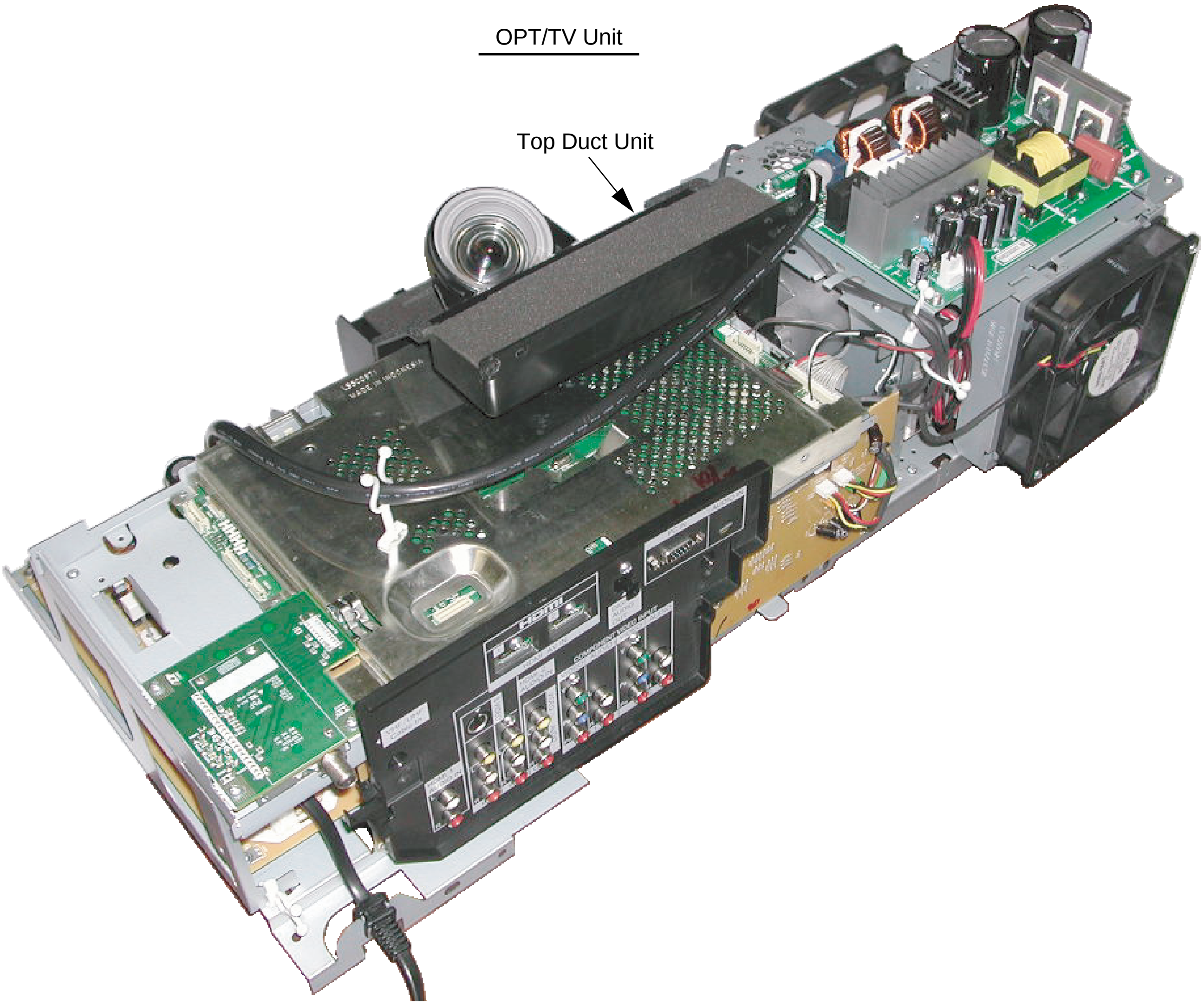


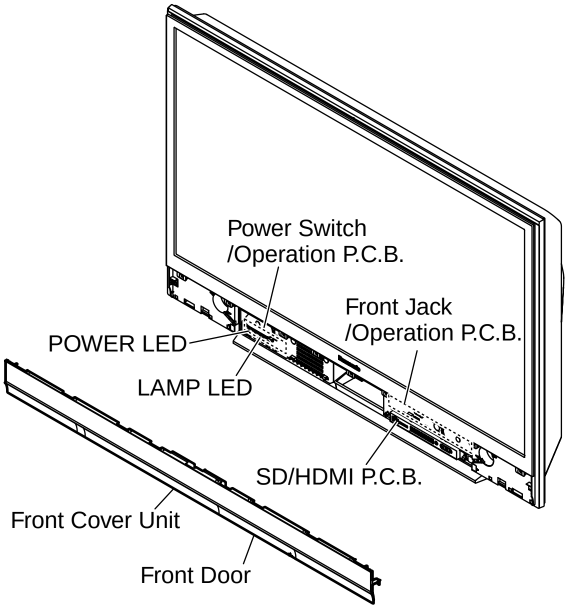
Fig. 9-5

6 Troubleshooting Guide

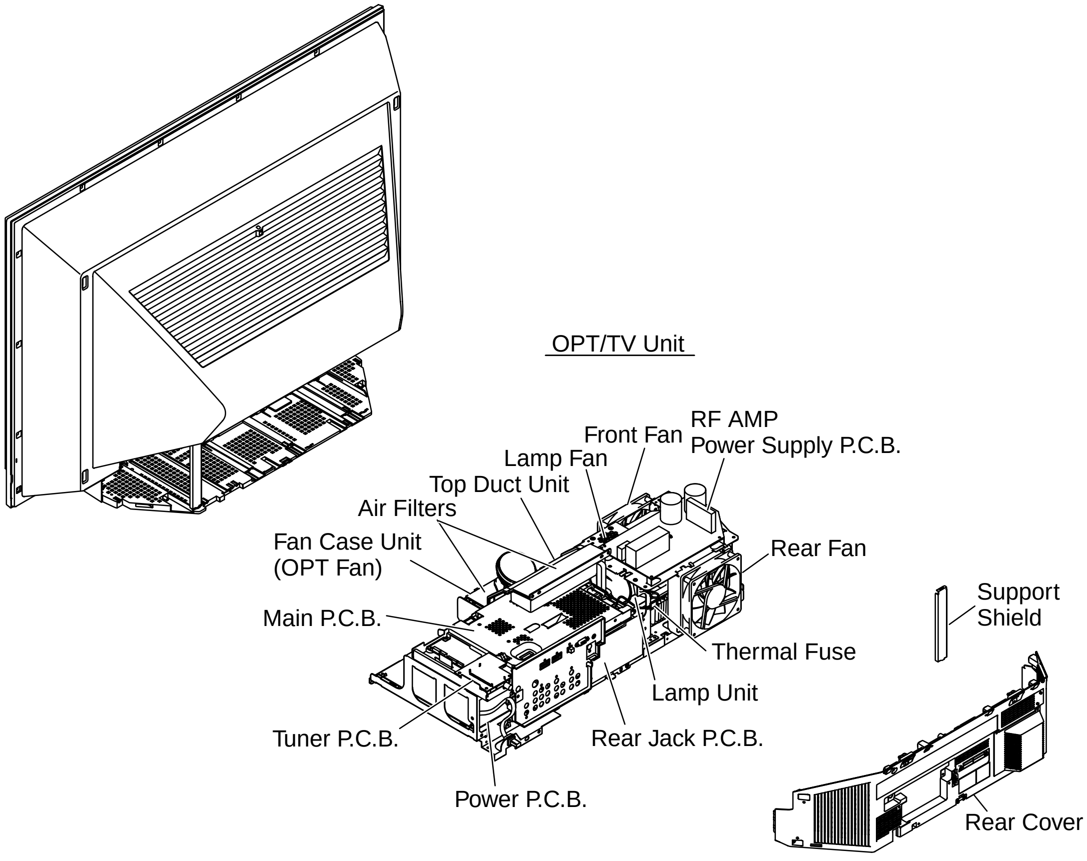
6.1. Troubleshooting Hints for Block Level Repair

MAIN PARTS LOCATION

<Front View>

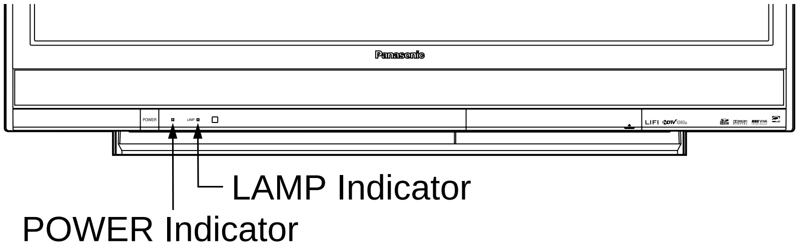

Power Switch
/Operation P.C.B.
Front Jack
/Operation P.C.B.
POWER LED
LAMP LED
SD/HDMI P.C.B.
Front Cover Unit
Front Door

<Rear View>


OPT/TV Unit
Front Fan
RF AMP
Power Supply P.C.B.
Lamp Fan
Top Duct Unit
Air Filters
Fan Case Unit
(OPT Fan)
Rear Fan
Support
Shield
Main P.C.B.
Thermal Fuse
Lamp Unit
Tuner P.C.B.
Rear Jack P.C.B.
Power P.C.B.
Rear Cover

INDICATIONS FOR ERROR CONDITIONS

Each Indicator facilitates finding the cause of an error.
When an error is detected, the Lamp goes off and the indicators on the front flash.



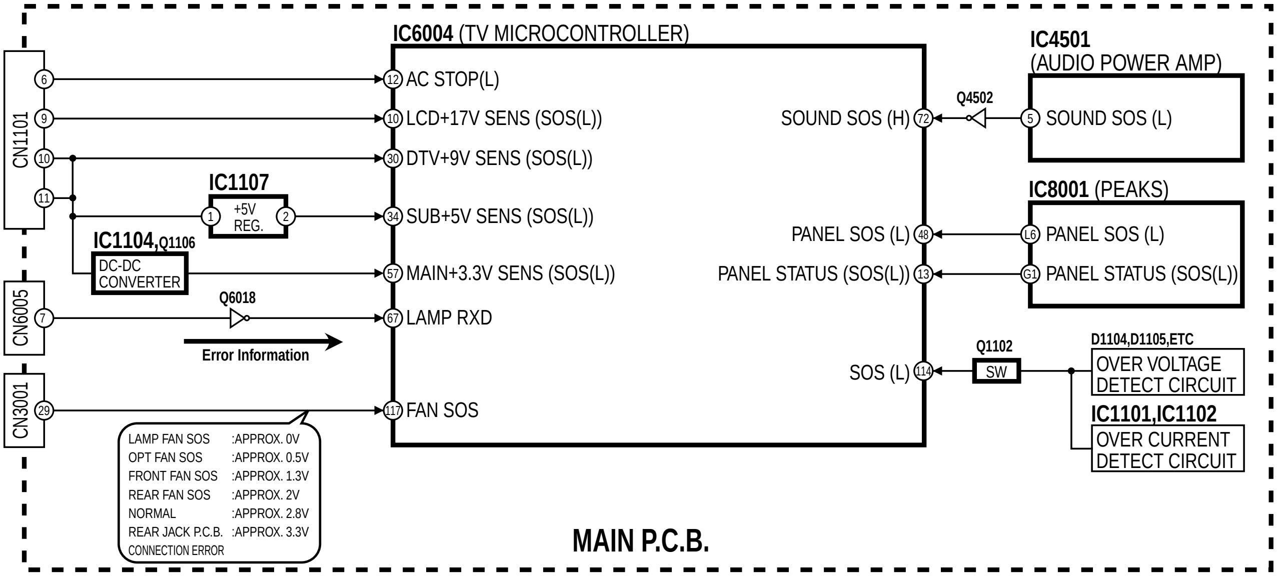
(Note 1)

Priority	Error Information	POWER Indicator flashes orange	LAMP Indicator flashes red	SOS	LAMP OFF	RESET
1	Over voltage/Over current (SOS)	1	-	01	○	AC ON/OFF
2	Abnormal voltage (DTV+9V line)	2	-	02	○	
3	Abnormal voltage (SUB+5V line)	3	-	03	○	
4	Abnormal voltage (MAIN+3.3V line)	4	-	04	○	
5	IC4501 (Audio Amp) failure	6	-	06	○	
6	Communication error between Peaks (IC8001) and TV Microcontroller (IC6004)	7	-	07	○	
7	Communication error between Peaks (IC8001) and TV Microcontroller (IC6004)	9	-	09	○	
8	Abnormal voltage (POWER+17V line)	10	-	0A	○	
13	Lamp does not light up	-	2	02	○	Power ON/OFF
10	Lamp failure	-	3	03	○	
11	Abnormal Lamp temperature	-	4	04	○	
12	Lamp communication error	-	5	05	○ (Note 2)	
15	Lamp Fan stops	-	8	08	○	AC ON/OFF
16	Fan Case Unit (OPT Fan) stops	-	9	09	○	
17	Front Fan or Rear Fan stops	-	10	0A	○	
18	Rear Fan or Front Fan stops	-	11	0B	○	
14	Rear Jack PCB connection error	-	12	0C	○	
9	Abnormal Lamp input voltage (+28V)	-	13	0D	○	Power ON/OFF

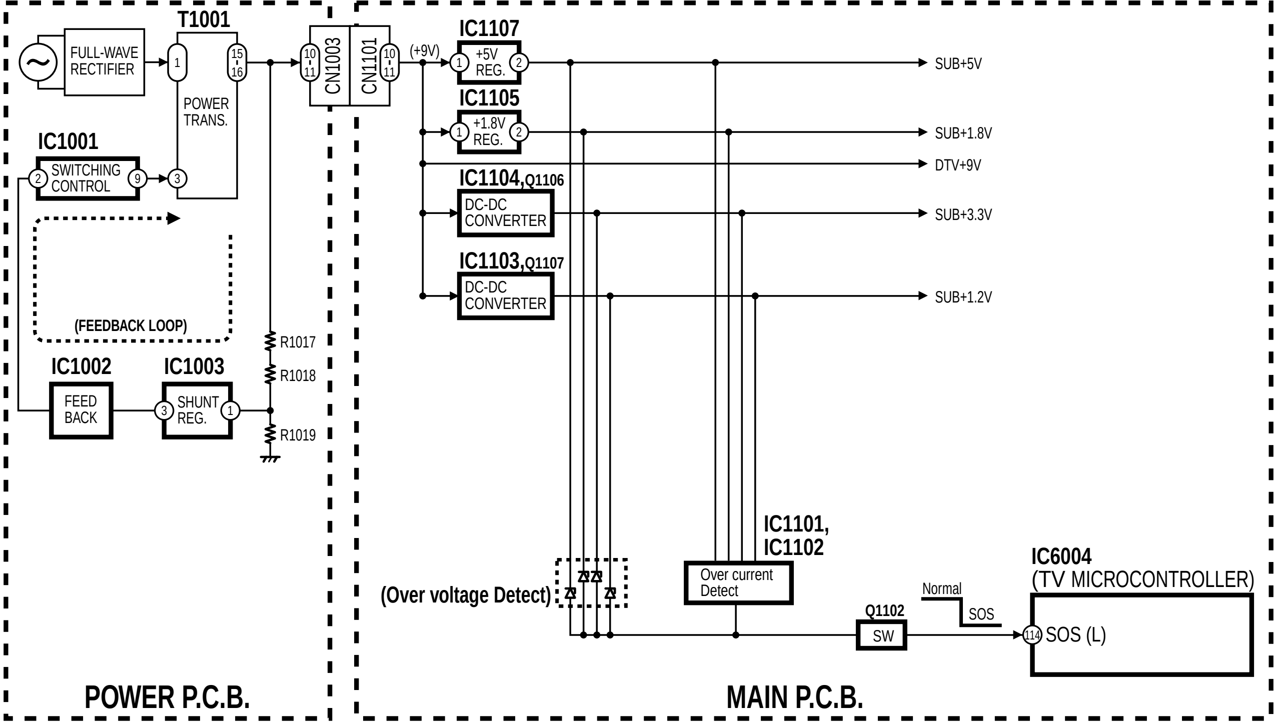
Note:
1. The detected Error data will be stored in the EEPROM, and SOS History (Code) is displayed in Self Check mode or Service Adjust mode (SRV-TOOL).
2. The Lamp Indicator will flash X5 immediately after the Lamp goes off. For this SOS only, the TV power will remain on.

Protection Circuit

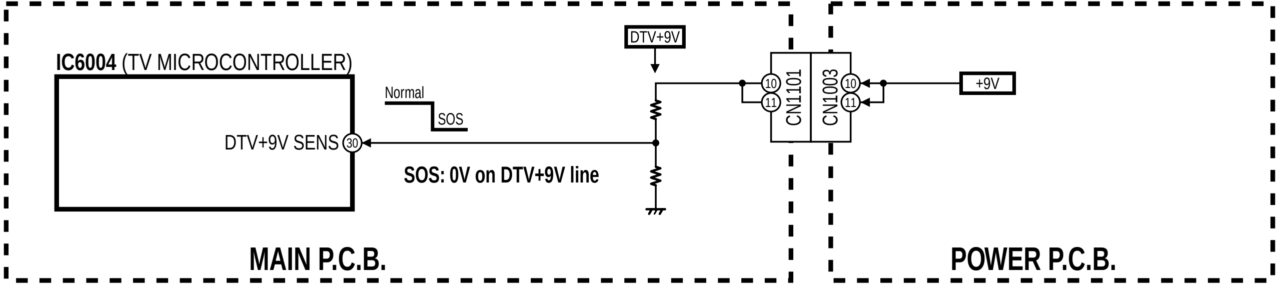
SOS terminal of IC6004 (TV microcontroller)


IC6004 (TV MICROCONTROLLER)
CN1101
6
9
10
11
12 AC STOP(L)
10 LCD+17V SENS (SOS(L))
30 DTV+9V SENS (SOS(L))
IC1107
+5V REG.
1
2
34 SUB+5V SENS (SOS(L))
IC1104,Q1106
DC-DC CONVERTER
57 MAIN+3.3V SENS (SOS(L))
CN6005
7
Q6018
67 LAMP RXD
Error Information
CN3001
29
117 FAN SOS
LAMP FAN SOS :APPROX. 0V
OPT FAN SOS :APPROX. 0.5V
FRONT FAN SOS :APPROX. 1.3V
REAR FAN SOS :APPROX. 2V
NORMAL :APPROX. 2.8V
REAR JACK P.C.B. :APPROX. 3.3V
CONNECTION ERROR
SOUND SOS (H) 72
Q4502
IC4501
(AUDIO POWER AMP)
5 SOUND SOS (L)
IC8001 (PEAKS)
PANEL SOS (L) 48
L6 PANEL SOS (L)
PANEL STATUS (SOS(L)) 13
G1 PANEL STATUS (SOS(L))
SOS (L) 114
Q1102
SW
D1104,D1105,ETC
OVER VOLTAGE DETECT CIRCUIT
IC1101,IC1102
OVER CURRENT DETECT CIRCUIT
MAIN P.C.B.

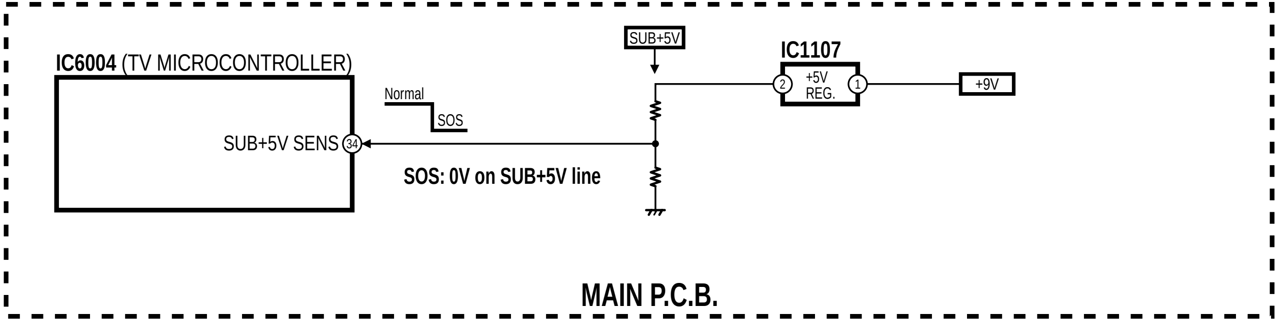
[POWER Indicator one blink] Over voltage/current detection circuit


T1001
FULL-WAVE RECTIFIER
1
15
16
POWER TRANS.
3
IC1001
SWITCHING CONTROL
2
9
(FEEDBACK LOOP)
R1017
R1018
R1019
IC1002
FEED BACK
IC1003
SHUNT REG.
3
1
CN1003
CN1101
10
11
(+9V)
IC1107
+5V REG.
1
2
SUB+5V
IC1105
+1.8V REG.
SUB+1.8V
DTV+9V
IC1104,Q1106
DC-DC CONVERTER
SUB+3.3V
IC1103,Q1107
DC-DC CONVERTER
SUB+1.2V
IC1101,
IC1102
Over current Detect
(Over voltage Detect)
Q1102
SW
Normal
SOS
IC6004
(TV MICROCONTROLLER)
114 SOS (L)
POWER P.C.B.
MAIN P.C.B.

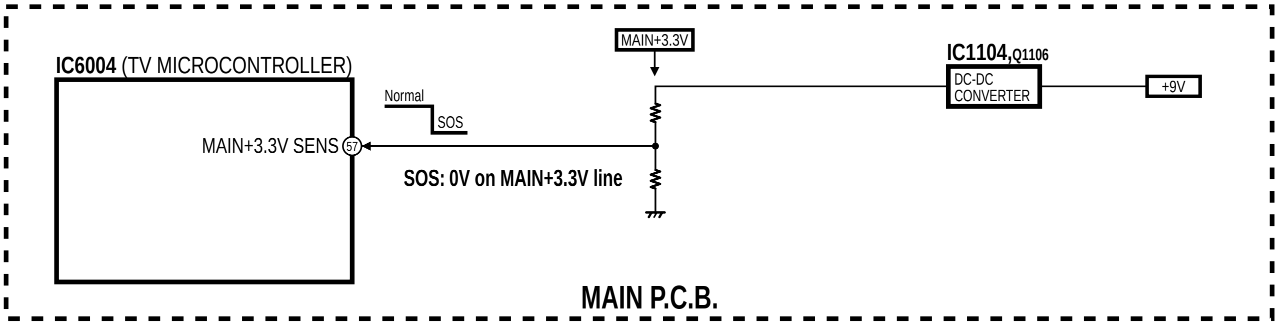
[POWER Indicator two blinks] Abnormal voltage (DTV+9V) detection circuit


IC6004 (TV MICROCONTROLLER)
DTV+9V SENS 30
Normal
SOS
DTV+9V
SOS: 0V on DTV+9V line
CN1101
CN1003
10
11
+9V
MAIN P.C.B.
POWER P.C.B.

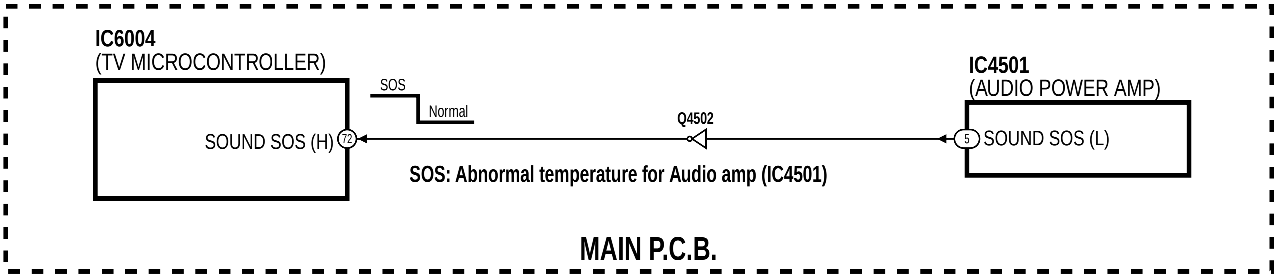
[POWER Indicator three blinks] Abnormal voltage (SUB+5V line) detection circuit


SUB+5V
IC1107
IC6004 (TV MICROCONTROLLER)
+5V REG.
2
1
+9V
Normal
SOS
SUB+5V SENS
34
SOS: 0V on SUB+5V line
MAIN P.C.B.

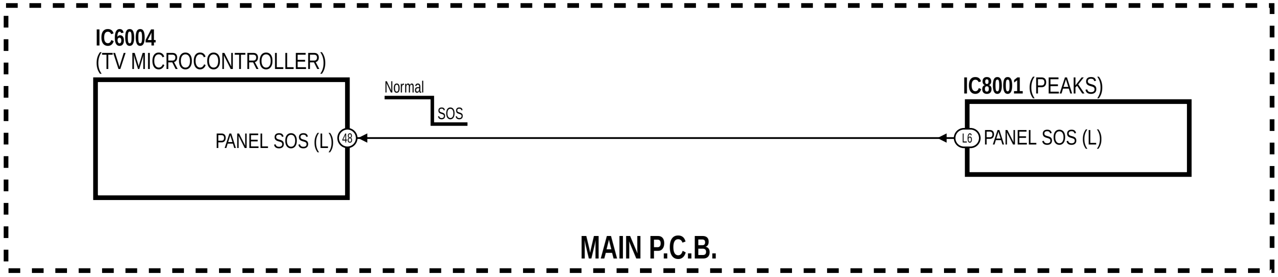
[POWER Indicator four blinks] Abnormal voltage (MAIN+3.3V line) detection circuit


MAIN+3.3V
IC1104,Q1106
IC6004 (TV MICROCONTROLLER)
DC-DC CONVERTER
+9V
Normal
SOS
MAIN+3.3V SENS
57
SOS: 0V on MAIN+3.3V line
MAIN P.C.B.

[POWER Indicator six blinks] Audio Amp (IC4501) failure detection circuit

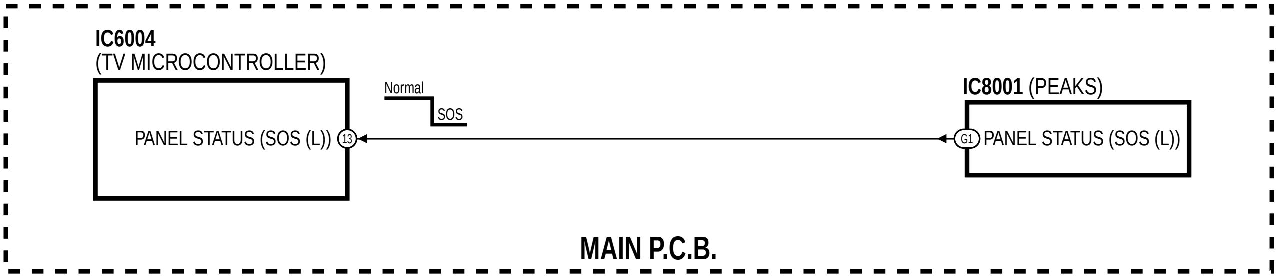

IC6004
(TV MICROCONTROLLER)
IC4501
(AUDIO POWER AMP)
SOS
Normal
Q4502
SOUND SOS (H)
72
5
SOUND SOS (L)
SOS: Abnormal temperature for Audio amp (IC4501)
MAIN P.C.B.

[POWER Indicator seven blinks]
Communication error between Peaks (IC8001) and TV microcontroller (IC6004) detection circuit


IC6004
(TV MICROCONTROLLER)
Normal
SOS
IC8001 (PEAKS)
PANEL SOS (L)
48
L6
PANEL SOS (L)
MAIN P.C.B.

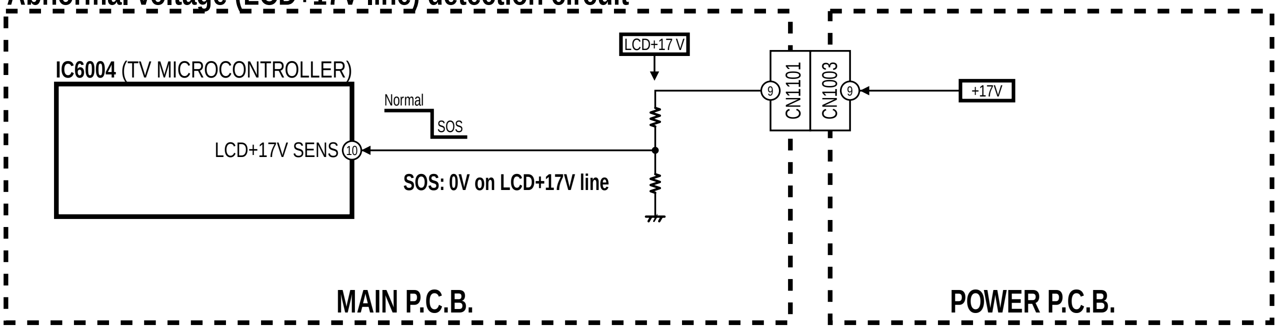
[POWER Indicator nine blinks]

Communication error between Peaks (IC8001) and TV microcontroller (IC6004) detection circuit


IC6004
(TV MICROCONTROLLER)
PANEL STATUS (SOS (L))
13
Normal
SOS
IC8001 (PEAKS)
G1
PANEL STATUS (SOS (L))
MAIN P.C.B.

[POWER Indicator ten blinks]

Abnormal voltage (LCD+17V line) detection circuit


IC6004 (TV MICROCONTROLLER)
LCD+17V SENS
10
Normal
SOS
LCD+17 V
SOS: 0V on LCD+17V line
9
CN1101
CN1003
9
+17V
MAIN P.C.B.
POWER P.C.B.

[LAMP Indicator two blinks]

Lamp does not light up detection circuit

[LAMP Indicator three blinks]

Lamp failure detection circuit

[LAMP Indicator four blinks]

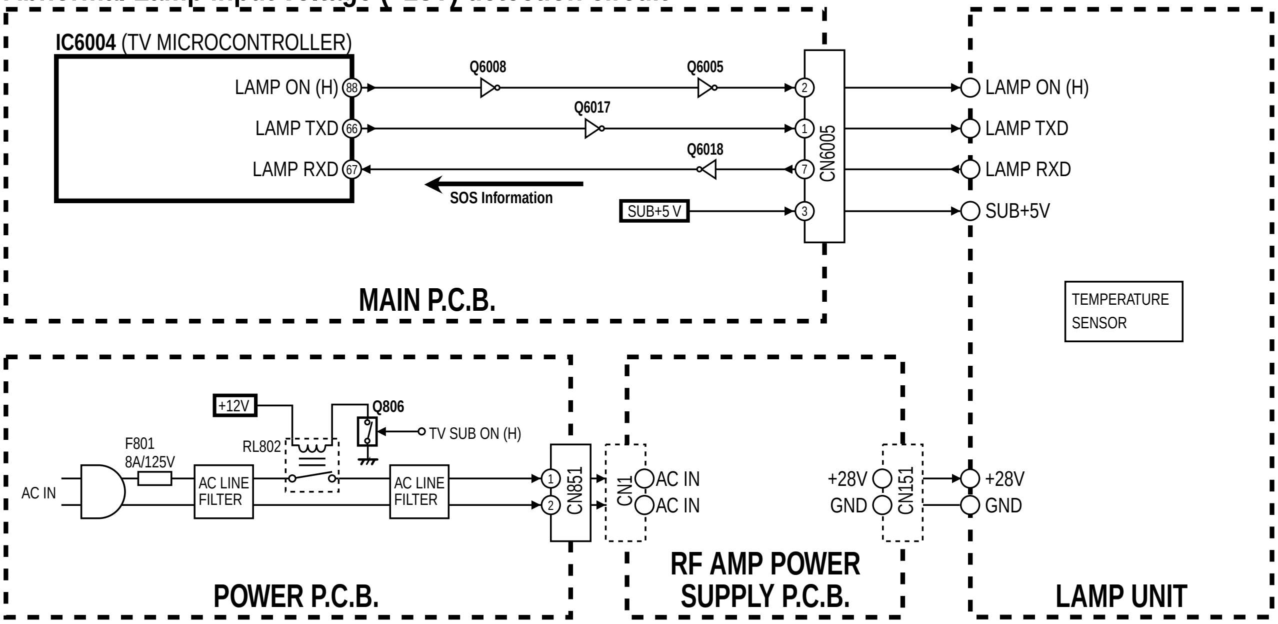
Abnormal Lamp temperature detection circuit

[LAMP Indicator five blinks]

Lamp communication error detection circuit

[LAMP Indicator thirteen blinks]

Abnormal Lamp input voltage (+28V) detection circuit


IC6004 (TV MICROCONTROLLER)
LAMP ON (H)
88
LAMP TXD
66
LAMP RXD
67
Q6008
Q6005
Q6017
Q6018
SOS Information
SUB+5 V
2
1
7
3
CN6005
LAMP ON (H)
LAMP TXD
LAMP RXD
SUB+5V
MAIN P.C.B.
TEMPERATURE SENSOR
+12V
Q806
TV SUB ON (H)
F801
8A/125V
RL802
AC IN
AC LINE FILTER
AC LINE FILTER
1
2
CN851
CN1
AC IN
AC IN
+28V
GND
CN151
+28V
GND
POWER P.C.B.
RF AMP POWER SUPPLY P.C.B.
LAMP UNIT

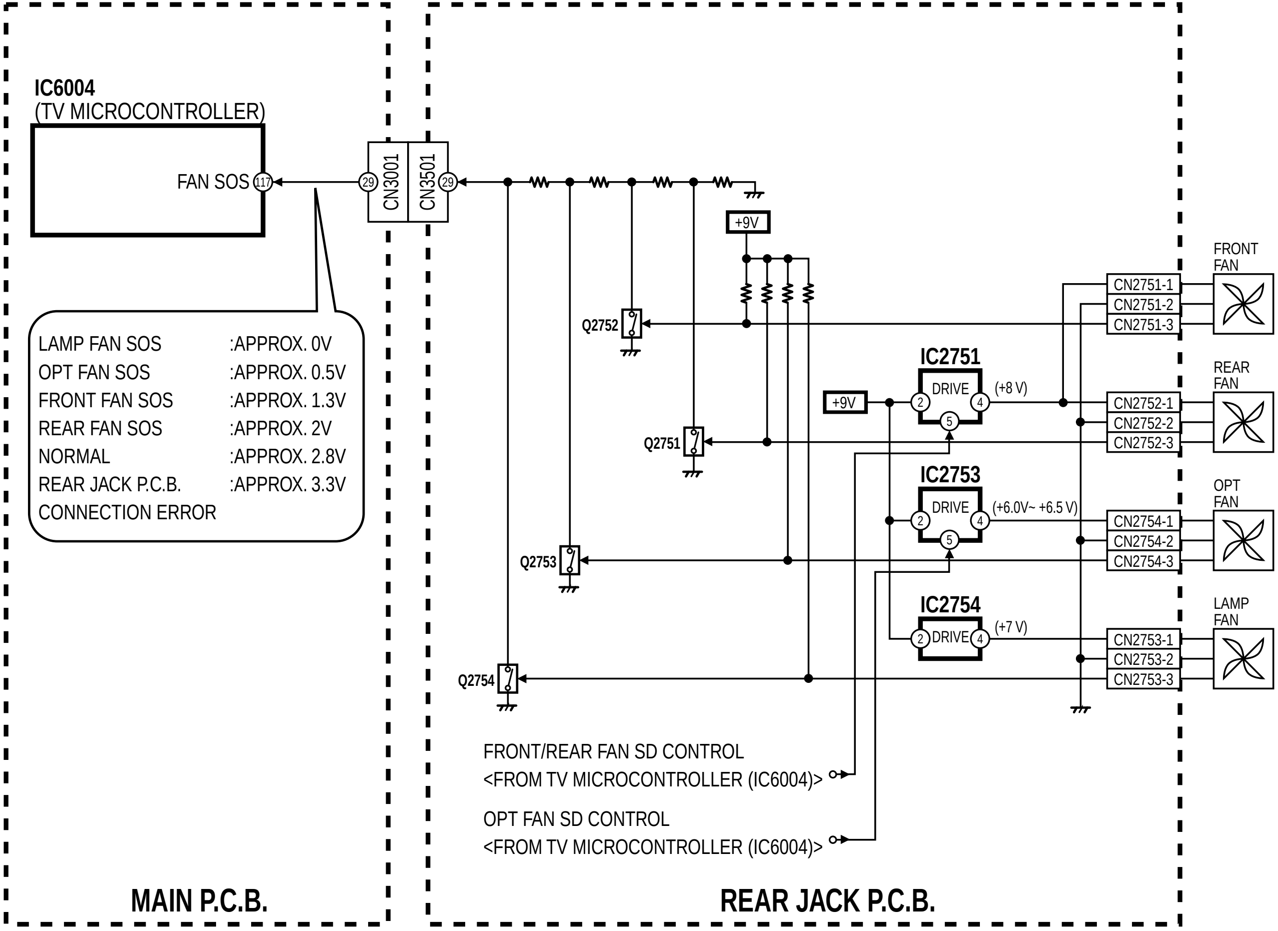
[LAMP Indicator eight blinks] LAMP Fan stops detection circuit

[LAMP Indicator nine blinks] OPT Fan stops detection circuit

[LAMP Indicator ten blinks] Front Fan or Rear Fan stops detection circuit

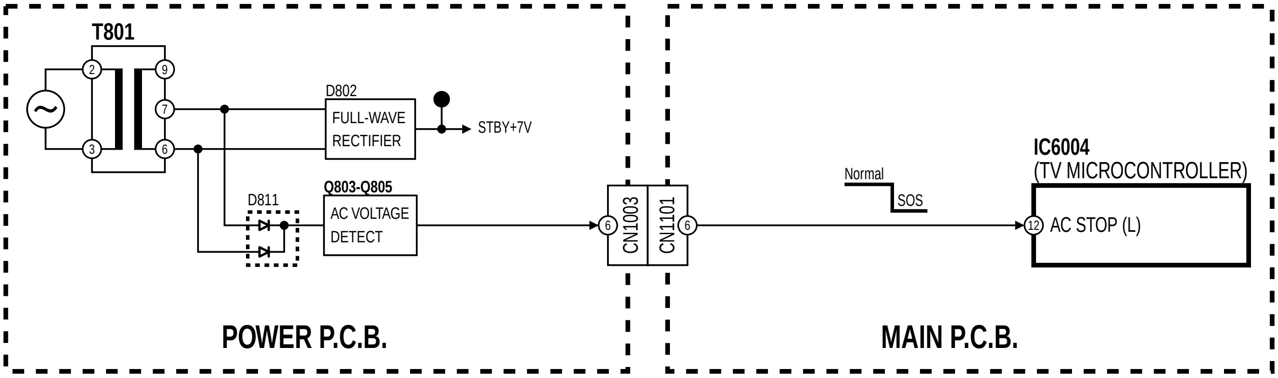
[LAMP Indicator eleven blinks] Rear Fan or Front Fan stops detection circuit

[LAMP Indicator twelve blinks] Rear Jack P.C.B. connection error detection circuit

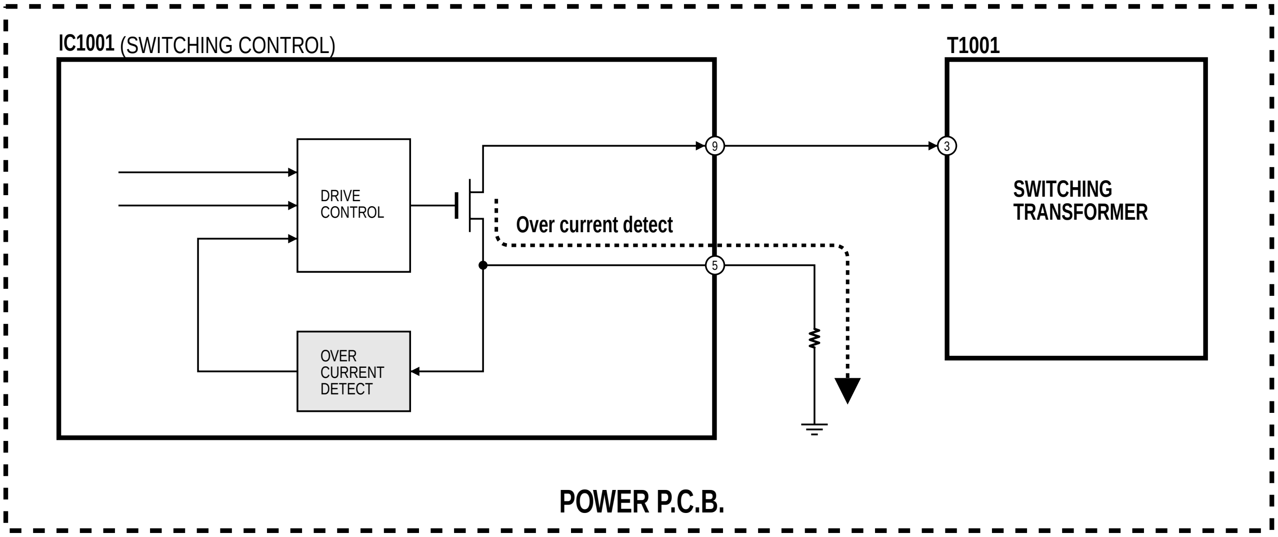

IC6004
(TV MICROCONTROLLER)
FAN SOS
117
29
CN3001
CN3501
29
+9V
Q2752
Q2751
Q2753
Q2754
IC2751
DRIVE
2
4
5
(+8 V)
+9V
IC2753
DRIVE
(+6.0V~ +6.5 V)
IC2754
DRIVE
(+7 V)
FRONT FAN
CN2751-1
CN2751-2
CN2751-3
REAR FAN
CN2752-1
CN2752-2
CN2752-3
OPT FAN
CN2754-1
CN2754-2
CN2754-3
LAMP FAN
CN2753-1
CN2753-2
CN2753-3
FRONT/REAR FAN SD CONTROL
<FROM TV MICROCONTROLLER (IC6004)>
OPT FAN SD CONTROL
<FROM TV MICROCONTROLLER (IC6004)>
MAIN P.C.B.
REAR JACK P.C.B.

LAMP FAN SOS :APPROX. 0V
OPT FAN SOS :APPROX. 0.5V
FRONT FAN SOS :APPROX. 1.3V
REAR FAN SOS :APPROX. 2V
NORMAL :APPROX. 2.8V
REAR JACK P.C.B. CONNECTION ERROR :APPROX. 3.3V

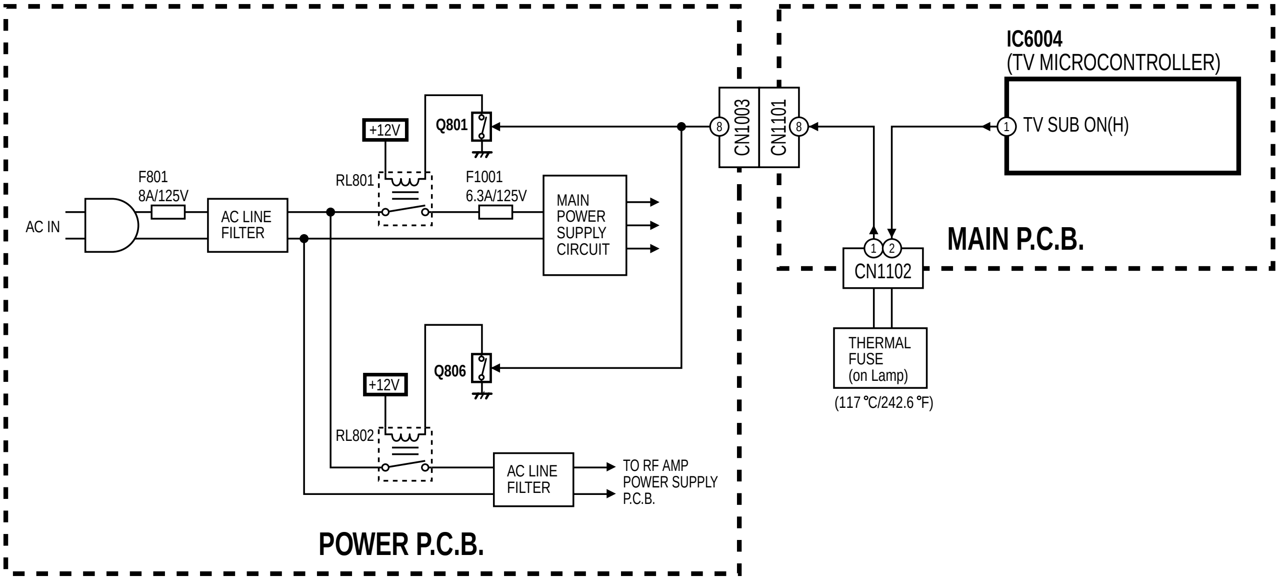
● AC stop detection circuit


T801
2
9
7
3
6
D802
FULL-WAVE RECTIFIER
STBY+7V
D811
Q803-Q805
AC VOLTAGE DETECT
6
CN1003
CN1101
6
Normal
SOS
IC6004
(TV MICROCONTROLLER)
12
AC STOP (L)
POWER P.C.B.
MAIN P.C.B.

● Over current detection circuit


IC1001 (SWITCHING CONTROL)
T1001
DRIVE CONTROL
9
3
SWITCHING TRANSFORMER
Over current detect
5
OVER CURRENT DETECT
POWER P.C.B.

● Abnormal Temperature (Thermal fuse) detection circuit


IC6004
(TV MICROCONTROLLER)
+12V
Q801
8
CN1003
CN1101
8
1
TV SUB ON(H)
F801
8A/125V
RL801
F1001
6.3A/125V
AC IN
AC LINE FILTER
MAIN POWER SUPPLY CIRCUIT
MAIN P.C.B.
1
2
CN1102
THERMAL FUSE (on Lamp)
(117 °C/242.6 °F)
Q806
+12V
RL802
AC LINE FILTER
TO RF AMP POWER SUPPLY P.C.B.
POWER P.C.B.

How to solve problems indicated by the Error Indication

(The symptom of all errors is that the Lamp goes off)

Note: Before performing troubleshooting, confirm that all connector cables in the unit are connected correctly.

POWER Indicator	Problem	Possible Solution
1	**[POWER Indicator one blink]** The following voltage lines on the Main P.C.B. is over current. • SUB+5V line • SUB+1.8V line • SUB+3.3V line • SUB+1.2V line The following voltage lines on the Main P.C.B. is over voltage. • SUB+5V line • SUB+1.8V line • SUB+3.3V line • SUB+1.2V line	1. Replace the Power P.C.B. 2. If still NG, replace the OPT/TV Unit.
2	**[POWER Indicator two blinks]** DT+9V line error.	1. Check that Connector CN1102 (Thermal Fuse) on the Main P.C.B. is connected firmly. 2. If still NG, replace the Power P.C.B. 3. If still NG, replace the OPT/TV Unit.
3	**[POWER Indicator three blinks]** SUB+5V line error.	1. Replace the OPT/TV Unit.
4	**[POWER Indicator four blinks]** MAIN+3.3V line error.	
6	**[POWER Indicator six blinks]** AUDIO AMP (IC4501) failure	
7	**[POWER Indicator seven blinks]** Communication error between Peaks (IC8001) and TV microcontroller (IC6004) on the Main P.C.B.	
9	**[POWER Indicator nine blinks]** Communication error between Peaks (IC8001) and TV microcontroller (IC6004) on the Main P.C.B.	
10	**[POWER Indicator ten blinks]** LCD+17V line error.	1. Replace the Power P.C.B. 2. If still NG, replace the OPT/TV Unit.

How to solve problems indicated by the Error Indication

(The symptom of all errors is that the Lamp goes off)

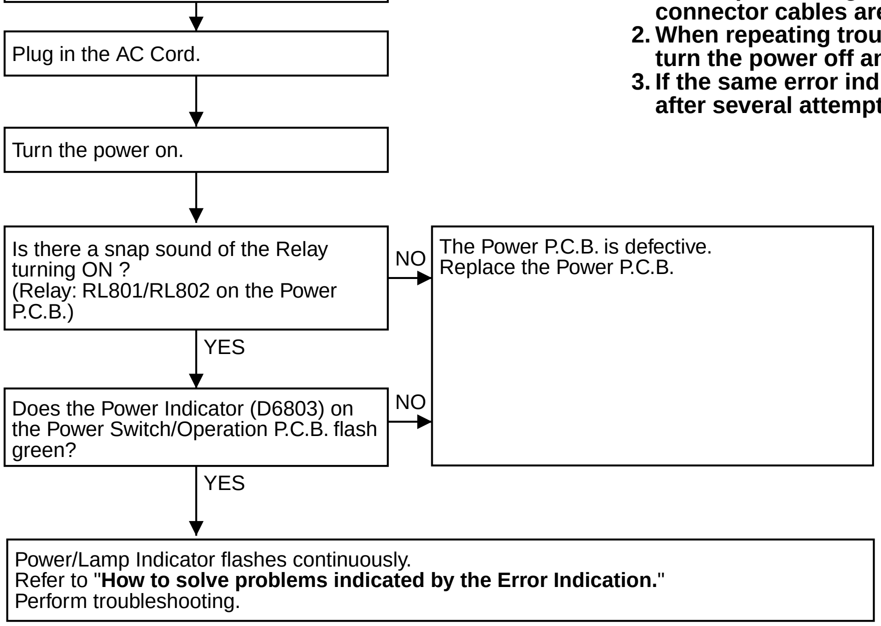
Note: Before performing the troubleshooting, confirm that all connector cables in the unit are connected correctly.

LAMP Indicator	Problem	Possible Solution
2	**[LAMP Indicator two blinks]** Lamp does not light up.	1. Try to turn on the power several times. (Wait 5 minutes before retrying.) 2. If still NG, replace the Lamp Unit.
3	**[LAMP Indicator three blinks]** Lamp failure (Internal Lamp thermistor open or short).	1. Try to turn on the power several times. (Wait 5 minutes before retrying.) 2. If still NG, replace the Lamp Unit.
4	**[LAMP Indicator four blinks]** Abnormal Lamp temperature (more than 92 ˚C).	1. Relocate the unit to a proper location. Keep the unit at least 100 mm (4") away from the wall to provide proper ventilation because warm air is discharged. Blocking the ventilation opening of the cooling fan may damage the unit. 2. Wait until the Lamp has cooled off (approximately 1 hour) and try to turn on the power several times. 3. If still NG, check whether the Fans rotate normally. 4. If still NG, replace the Lamp Unit.
5	**[LAMP Indicator five blinks]** Lamp communication error.	1. Try to turn on the power several times. (Wait 5 minutes before retrying.) 2. If still NG, check that the cable between CN6005 on the Main P.C.B. and Lamp Unit is connected firmly.
8	**[LAMP Indicator eight blinks]** Cooling Fan (Lamp Fan) malfunction.	1. Check that Connector CN2753 on the Rear Jack P.C.B. is connected firmly. 2. If still NG, replace the Lamp Fan.
9	**[LAMP Indicator nine blinks]** Cooling Fan (OPT Fan) malfunction.	1. Check that Connector CN2754 on the Rear Jack P.C.B. is connected firmly. 2. If still NG, replace the OPT/TV Unit (Fan Case Unit (OPT Fan)).
10	**[LAMP Indicator ten blinks]** Cooling Fan (Front Fan or Rear Fan) malfunction.	1. Check that Connector CN2751 or CN2752 on the Rear Jack P.C.B. is connected firmly. 2. If still NG, check whether the Front Fan or Rear Fan stopped and replace it. (Note: They are same Fan.)
11	**[LAMP Indicator eleven blinks]** Cooling Fan (Rear Fan or Front Fan) malfunction.	1. Check that Connector CN2752 or CN2751 on the Rear Jack P.C.B. is connected firmly. 2. If still NG, check whether the Front Fan or Rear Fan stopped and replace it. (Note: They are same Fan.)
12	**[LAMP Indicator twelve blinks]** Rear Jack P.C.B. connection error.	1. Check that Connector CN3501 on the Rear Jack P.C.B. is connected into Connector CN3001 on the Main P.C.B. firmly.
13	**[LAMP Indicator thirteen blinks]** Abnormal Lamp input voltage (+26V) Normal: +26V Abnormal: less than +20V	1. Try to turn on the power several times. (Wait 5 minutes before retrying.) 2. If still NG, check that Connector CN1 and CN151 on the RF AMP Power Supply P.C.B. are connected firmly. 3. If still NG, unplug the AC Cord and disconnect CN151 connector cable and check voltage at Pin 1, 2 or 3 of CN151 on the RF AMP Power Supply P.C.B. **See Figure a.** If OK (+26V), replace the Lamp Unit. If NG, check the voltage between Pin 1 and Pin 2 of CN1 on the RF AMP Power Supply P.C.B. If OK (AC120V), replace the RF AMP Power Supply P.C.B. If NG, replace the Power P.C.B.

LAMP DOES NOT LIGHT UP

Note:

1. **Before performing troubleshooting, confirm that all connector cables are connected properly.**
2. **When repeating troubleshooting, be sure to turn the power off and unplug the AC Cord.**
3. **If the same error indication repeatedly occurs after several attempts, proceed to the next step.**


Plug in the AC Cord.
Turn the power on.
Is there a snap sound of the Relay turning ON ? (Relay: RL801/RL802 on the Power P.C.B.)
NO
The Power P.C.B. is defective. Replace the Power P.C.B.
YES
Does the Power Indicator (D6803) on the Power Switch/Operation P.C.B. flash green?
NO
YES
Power/Lamp Indicator flashes continuously.
Refer to "**How to solve problems indicated by the Error Indication.**"
Perform troubleshooting.

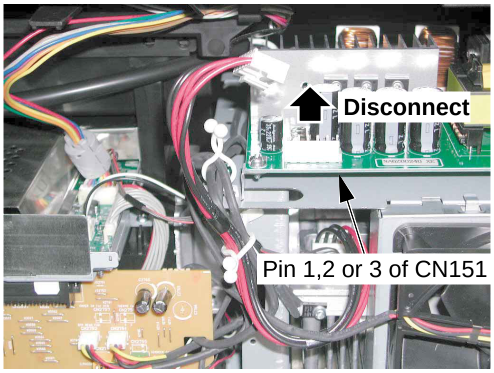
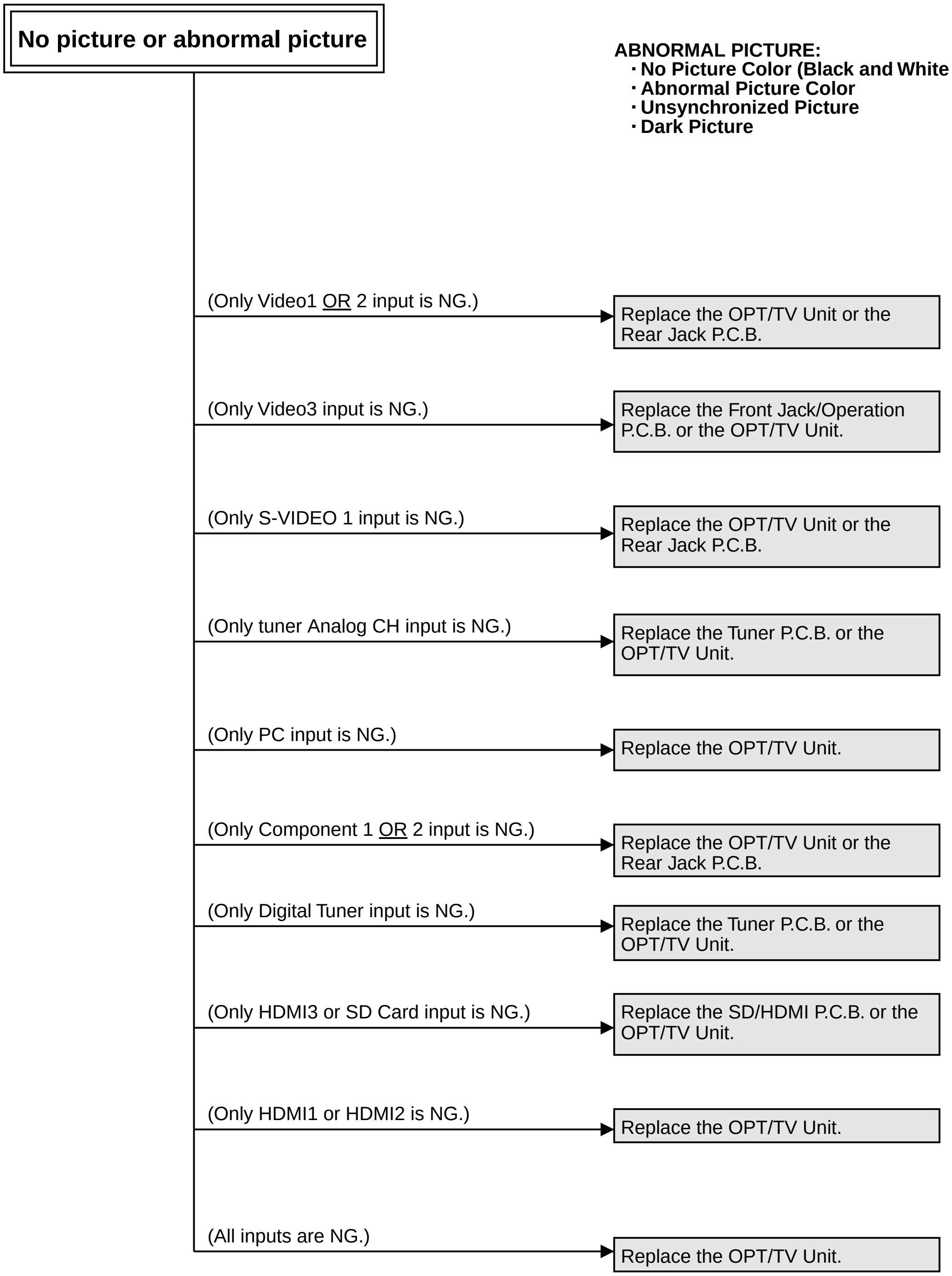
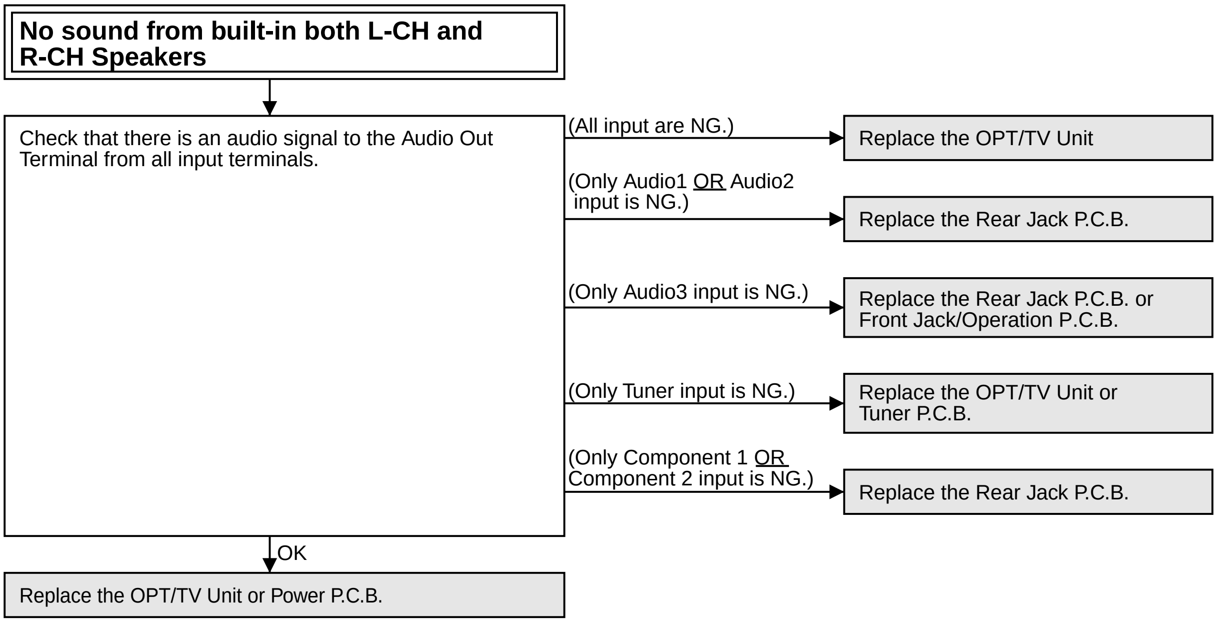

Disconnect
Pin 1,2 or 3 of CN151

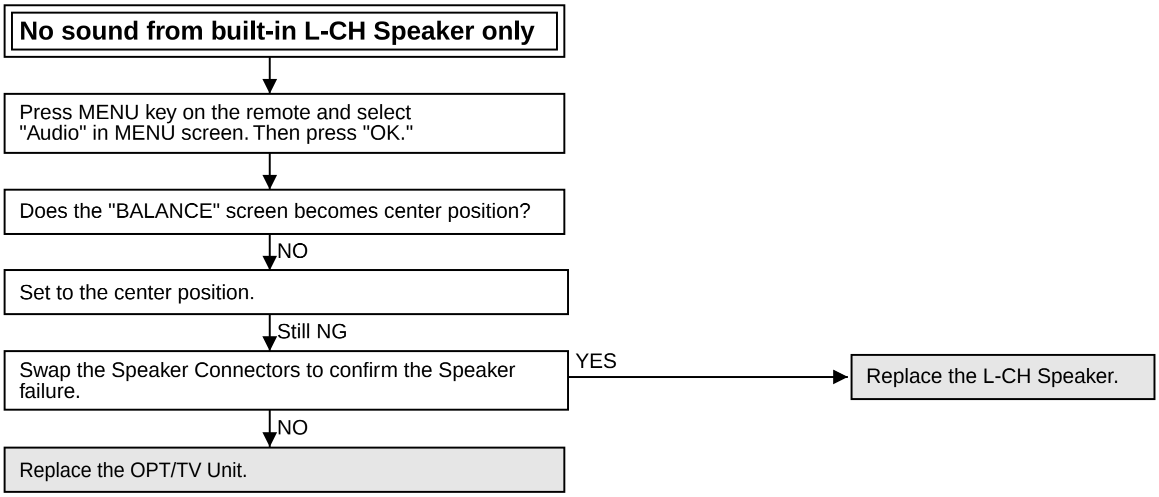
Figure. a

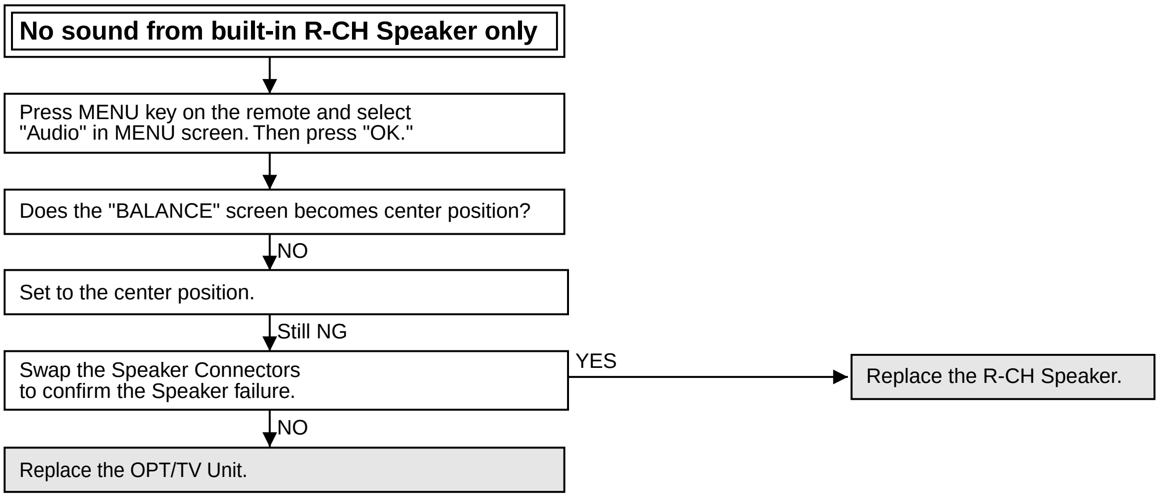
HOW TO DETERMINE WHICH P.C.B. IS DEFECTIVE

ABNORMAL PICTURE:
- **No Picture Color (Black and White picture)**
- **Abnormal Picture Color**
- **Unsynchronized Picture**
- **Dark Picture**

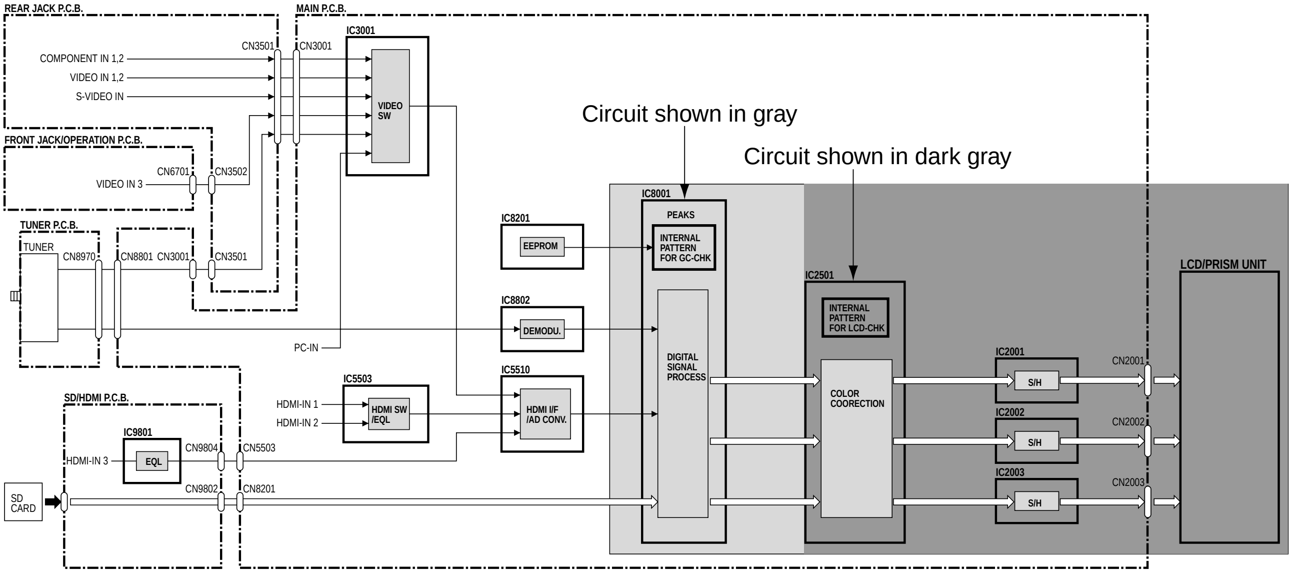

No picture or abnormal picture
(Only Video1 OR 2 input is NG.)
Replace the OPT/TV Unit or the Rear Jack P.C.B.
(Only Video3 input is NG.)
Replace the Front Jack/Operation P.C.B. or the OPT/TV Unit.
(Only S-VIDEO 1 input is NG.)
Replace the OPT/TV Unit or the Rear Jack P.C.B.
(Only tuner Analog CH input is NG.)
Replace the Tuner P.C.B. or the OPT/TV Unit.
(Only PC input is NG.)
Replace the OPT/TV Unit.
(Only Component 1 OR 2 input is NG.)
Replace the OPT/TV Unit or the Rear Jack P.C.B.
(Only Digital Tuner input is NG.)
Replace the Tuner P.C.B. or the OPT/TV Unit.
(Only HDMI3 or SD Card input is NG.)
Replace the SD/HDMI P.C.B. or the OPT/TV Unit.
(Only HDMI1 or HDMI2 is NG.)
Replace the OPT/TV Unit.
(All inputs are NG.)
Replace the OPT/TV Unit.


No sound from built-in both L-CH and R-CH Speakers
Check that there is an audio signal to the Audio Out Terminal from all input terminals.
(All input are NG.)
Replace the OPT/TV Unit
(Only Audio1 OR Audio2 input is NG.)
Replace the Rear Jack P.C.B.
(Only Audio3 input is NG.)
Replace the Rear Jack P.C.B. or Front Jack/Operation P.C.B.
(Only Tuner input is NG.)
Replace the OPT/TV Unit or Tuner P.C.B.
(Only Component 1 OR Component 2 input is NG.)
Replace the Rear Jack P.C.B.
OK
Replace the OPT/TV Unit or Power P.C.B.


No sound from built-in L-CH Speaker only
Press MENU key on the remote and select "Audio" in MENU screen. Then press "OK."
Does the "BALANCE" screen becomes center position?
NO
Set to the center position.
Still NG
Swap the Speaker Connectors to confirm the Speaker failure.
YES
Replace the L-CH Speaker.
NO
Replace the OPT/TV Unit.


No sound from built-in R-CH Speaker only
Press MENU key on the remote and select "Audio" in MENU screen. Then press "OK."
Does the "BALANCE" screen becomes center position?
NO
Set to the center position.
Still NG
Swap the Speaker Connectors to confirm the Speaker failure.
YES
Replace the R-CH Speaker.
NO
Replace the OPT/TV Unit.

Tips for determining defective circuit in case of picture problem


REAR JACK P.C.B.
MAIN P.C.B.
COMPONENT IN 1,2
VIDEO IN 1,2
S-VIDEO IN
CN3501
CN3001
IC3001
VIDEO SW
FRONT JACK/OPERATION P.C.B.
CN6701
CN3502
VIDEO IN 3
TUNER P.C.B.
TUNER
CN8970
CN8801
CN3001
CN3501
PC-IN
IC8201
EEPROM
IC8802
DEMODU.
IC5503
HDMI SW /EQL
HDMI-IN 1
HDMI-IN 2
IC5510
HDMI I/F /AD CONV.
SD/HDMI P.C.B.
IC9801
EQL
HDMI-IN 3
CN9804
CN5503
CN9802
CN8201
SD CARD
IC8001
PEAKS
INTERNAL PATTERN FOR GC-CHK
DIGITAL SIGNAL PROCESS
IC2501
INTERNAL PATTERN FOR LCD-CHK
COLOR COORECTION
IC2001
S/H
IC2002
S/H
IC2003
S/H
CN2001
CN2002
CN2003
LCD/PRISM UNIT

Circuit shown in gray

Circuit shown in dark gray

Display the internal pattern for "LCD-CHK" in Service Adjust Mode.
Refer to "HOW TO DISPLAY THE INTERNAL PATTERN FOR LCD-CHK" as shown in Figure A.

→ If the internal pattern is OK, the circuit shown in dark gray can be judged OK.

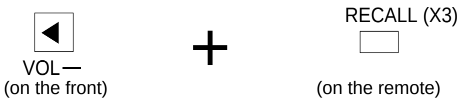
Display the internal pattern for "GC-CHK" in Service Adjust Mode.
Refer to "HOW TO DISPLAY THE INTERNAL PATTERN FOR GC-CHK" as shown in Figure B.

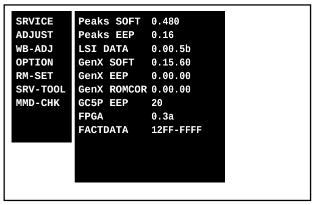
→ If the internal pattern is OK, the circuit shown in gray can be judged OK.

HOW TO DISPLAY THE INTERNAL PATTERN

Service Adjust Mode

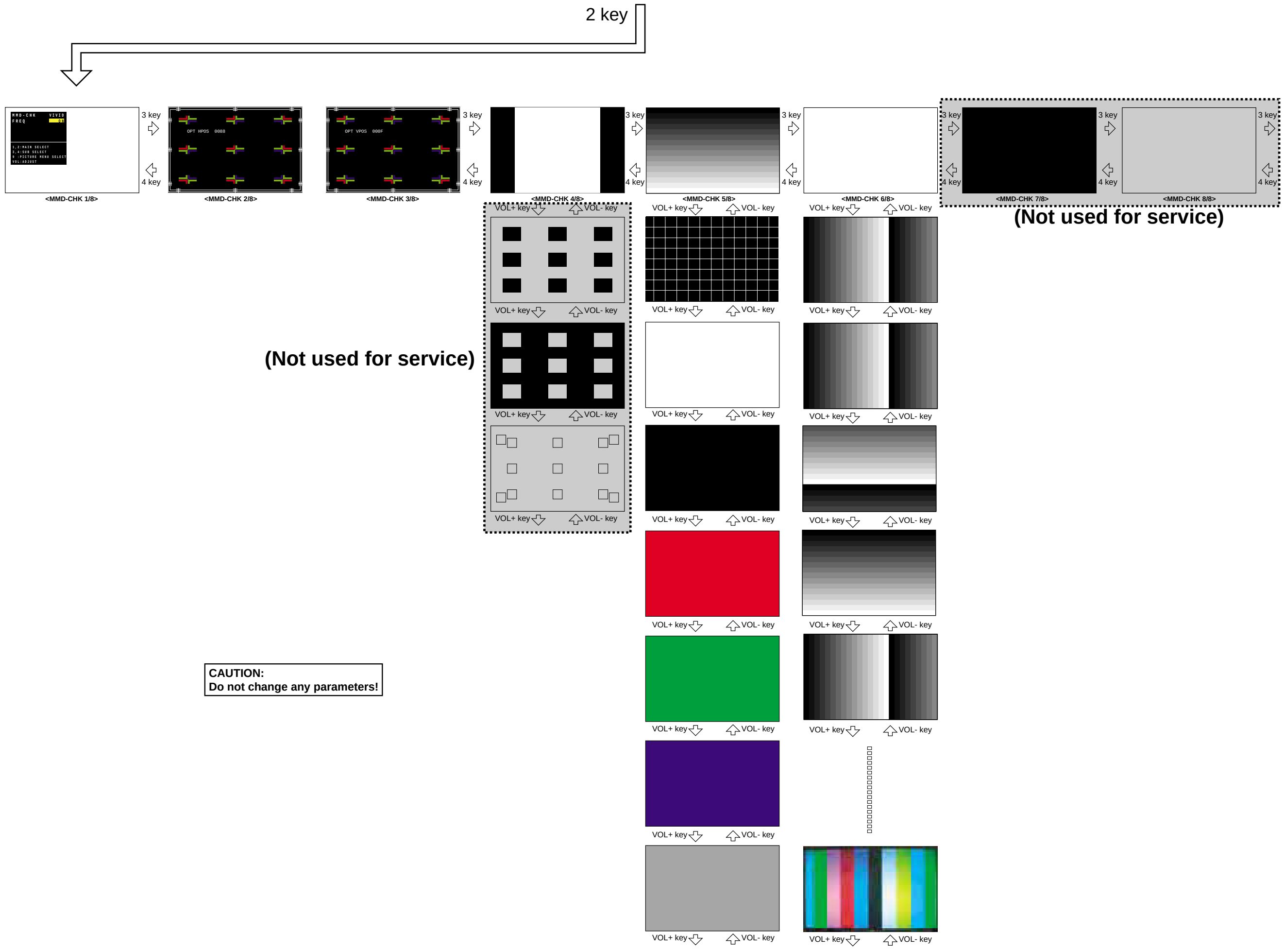
Enter:
VOLUME DOWN button + RECALL key (3 times)
(in power on condition)


RECALL (X3)
VOL –
(on the front)
+
(on the remote)



```
SRVICE      Peaks SOFT  0.480
ADJUST      Peaks EEP   0.16
WB-ADJ      LSI DATA    0.00.5b
OPTION      GenX SOFT   0.15.60
RM-SET      GenX EEP    0.00.00
SRV-TOOL    GenX ROMCOR 0.00.00
MMD-CHK     GC5P EEP    20
            FPGA        0.3a
            FACTDATA    12FF-FFFF
```

<Main Menu>


2 key
3 key
4 key
<MMD-CHK 1/8>
<MMD-CHK 2/8>
<MMD-CHK 3/8>
<MMD-CHK 4/8>
<MMD-CHK 5/8>
<MMD-CHK 6/8>
<MMD-CHK 7/8>
<MMD-CHK 8/8>
VOL+ key
VOL- key
(Not used for service)
(Not used for service)

CAUTION:
Do not change any parameters!

Internal Pattern for LCD-CHK (Figure. A)

Internal Pattern for GC-CHK (Figure. B)

7 Disassembly and Assembly Instructions

7.1. Cabinet Section

DISASSEMBLY METHOD OF CABINET SECTION

Cabinet section contains following removal procedures:

HOW TO REPLACE THE LAMP UNIT

a. Removal of Rear Cover
b. Removal of OPT/TV Unit
c. Removal of Lamp Shield Case Ass’y with Fans
d. Removal of Lamp Unit
e. Removal of Lamp Fan

REMOVAL OF THE OPT/TV UNIT

REMOVAL OF THE RF AMP POWER SUPPLY P.C.B.

REMOVAL OF THE FRONT FAN AND THE REAR FAN

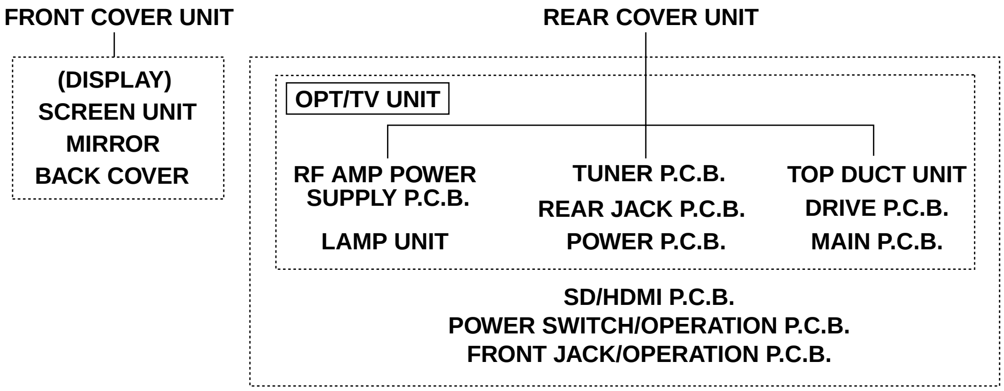
REMOVAL OF THE TUNER P.C.B., THE REAR JACK P.C.B. AND THE POWER P.C.B.

REMOVAL OF THE FRONT COVER UNIT AND THE DISPLAY

REMOVAL OF THE SCREEN UNIT FROM THE DISPLAY

DISASSEMBLY FLOWCHART

This flow chart indicates the disassembly steps of the cabinet parts and the P.C.Boards in order to gain access to item (s) to be serviced. When reassembling, perform the step (s) in the reverse order. Bend, route and dress the wires as they were originally.


FRONT COVER UNIT
(DISPLAY)
SCREEN UNIT
MIRROR
BACK COVER
REAR COVER UNIT
OPT/TV UNIT
RF AMP POWER SUPPLY P.C.B.
LAMP UNIT
TUNER P.C.B.
REAR JACK P.C.B.
POWER P.C.B.
TOP DUCT UNIT
DRIVE P.C.B.
MAIN P.C.B.
SD/HDMI P.C.B.
POWER SWITCH/OPERATION P.C.B.
FRONT JACK/OPERATION P.C.B.

Note:
The optical parts will be exposed to the dust in the air when the Top Duct Unit is removed. Therefore, it is strongly recommend to remove the Top Duct Unit only in a clean room.

Note :

a. Place a cloth or some other soft material under the P.C. Boards or Unit to prevent damage.
b. When reinstalling, ensure that the connectors are connected firmly and electrical components have not been damaged.
c. Do not supply power to the unit during disassembly and reassembly.

HOW TO REPLACE THE LAMP UNIT

Note:
Lamp debris may be noticed in the lamp compartment area after the rear cover is removed.
If present, follow the notes in the disassembly procedure.
if not, disregard these notes.

LAMP CAUTION:

The Lamp Unit becomes very hot during operation. When replacing the Lamp Unit, wait until it has cooled off (1 hour or more).

a. Removal of Rear Cover

1. Remove the Rear Cover by removing the 12 screws then pinching the 3 latch tabs.

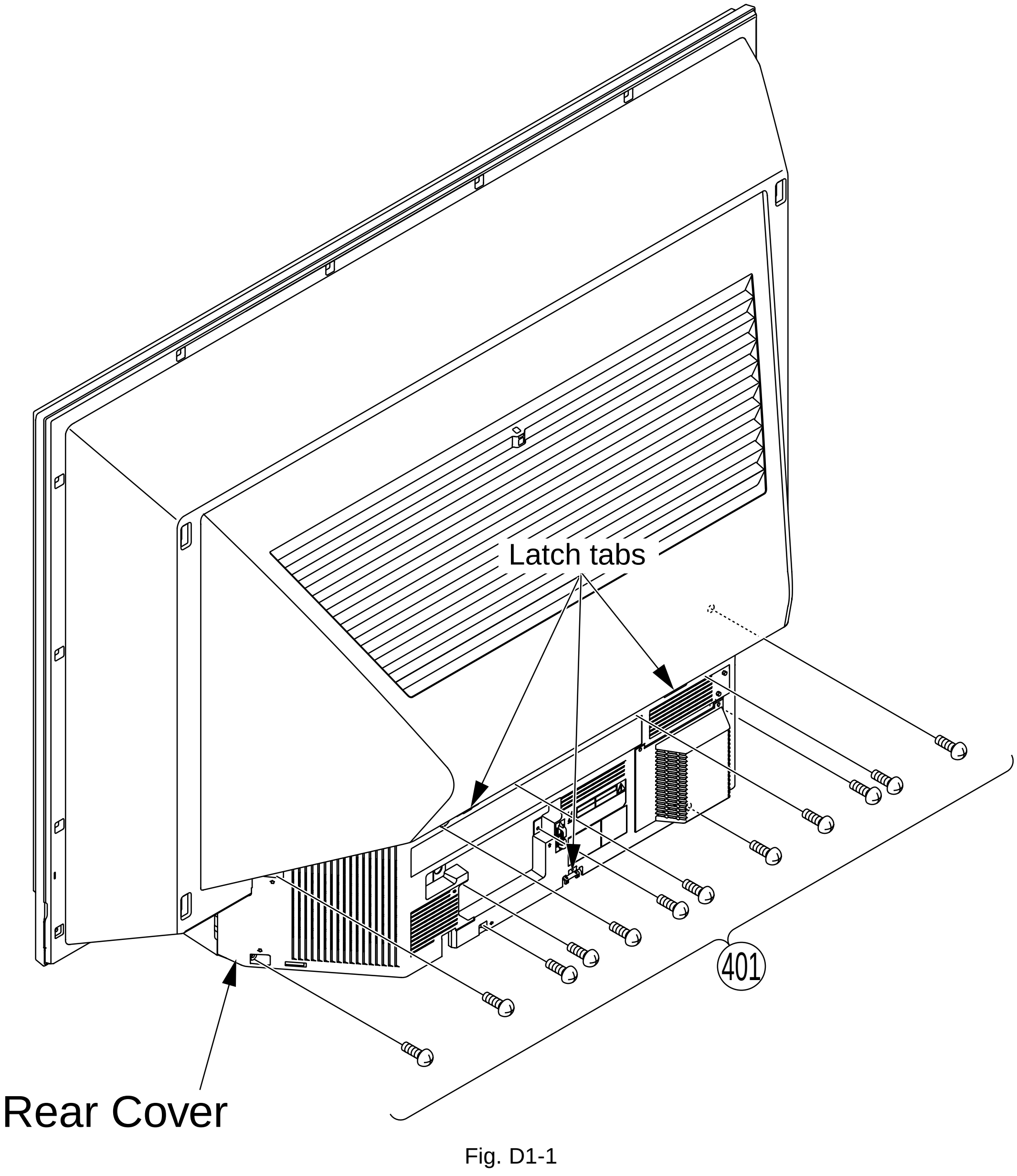


Fig. D1-1

Before trying to remove the OPT/TV Unit, check the area under the Lamp shown by the arrow in the following picture.

Note: If debris is present, clean the debris with a vacuum cleaner.

1. **Spread blanket or drop cloth (or similar material) on the floor to collect the debris that may fall during the removal of the OPT/TV Unit and the Lamp Unit.**
2. **Vacuum the debris thoroughly.**

b. Removal of OPT/TV Unit

1. Remove the right Support Shield by releasing the Locking Tab.
2. 1) Remove the 4 screws.
   2) Disconnect Connectors CN3502 (Ope), CN4501 (Speaker), CN5503 (SD), CN6003 (Power SW) and CN8201 (HDMI).

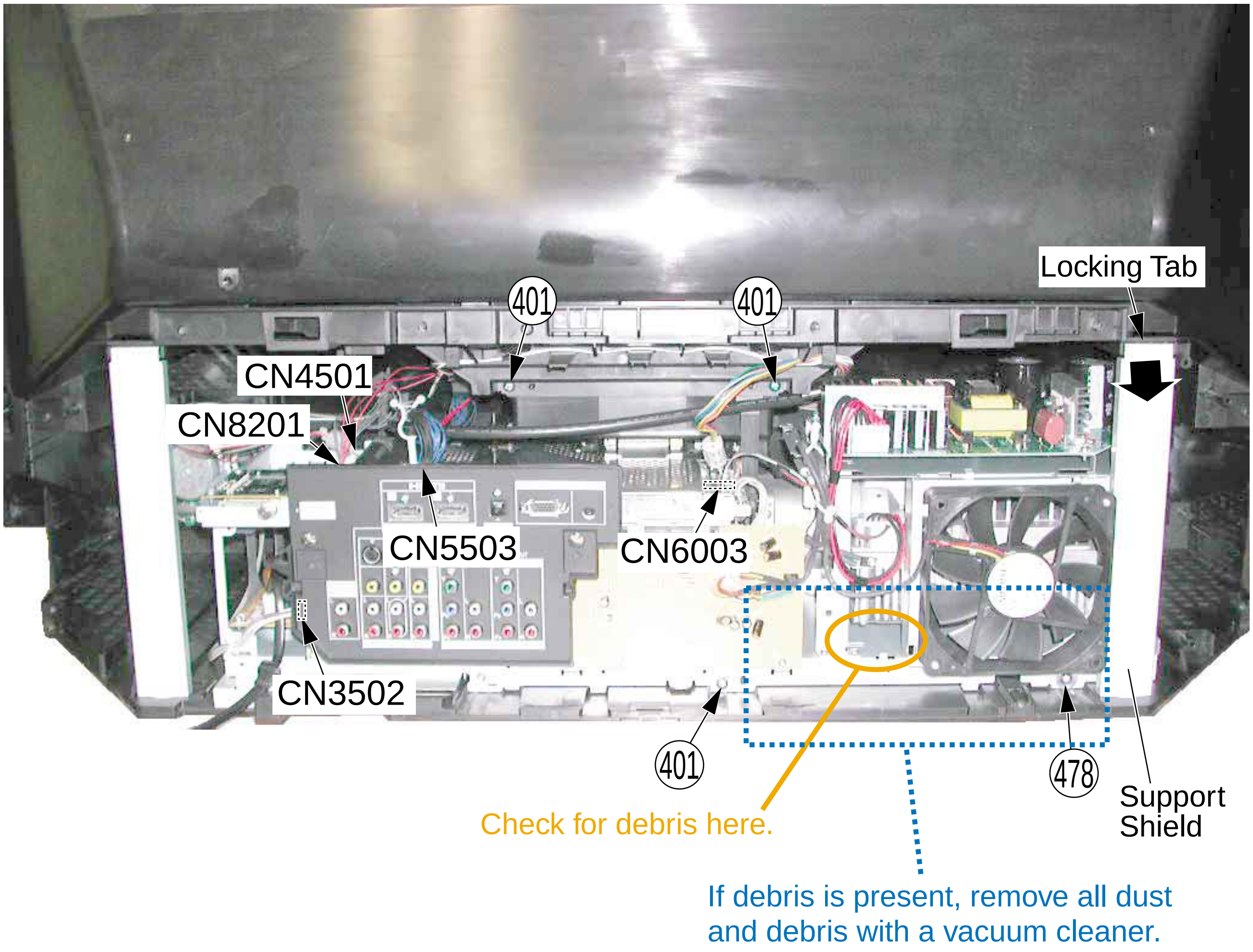
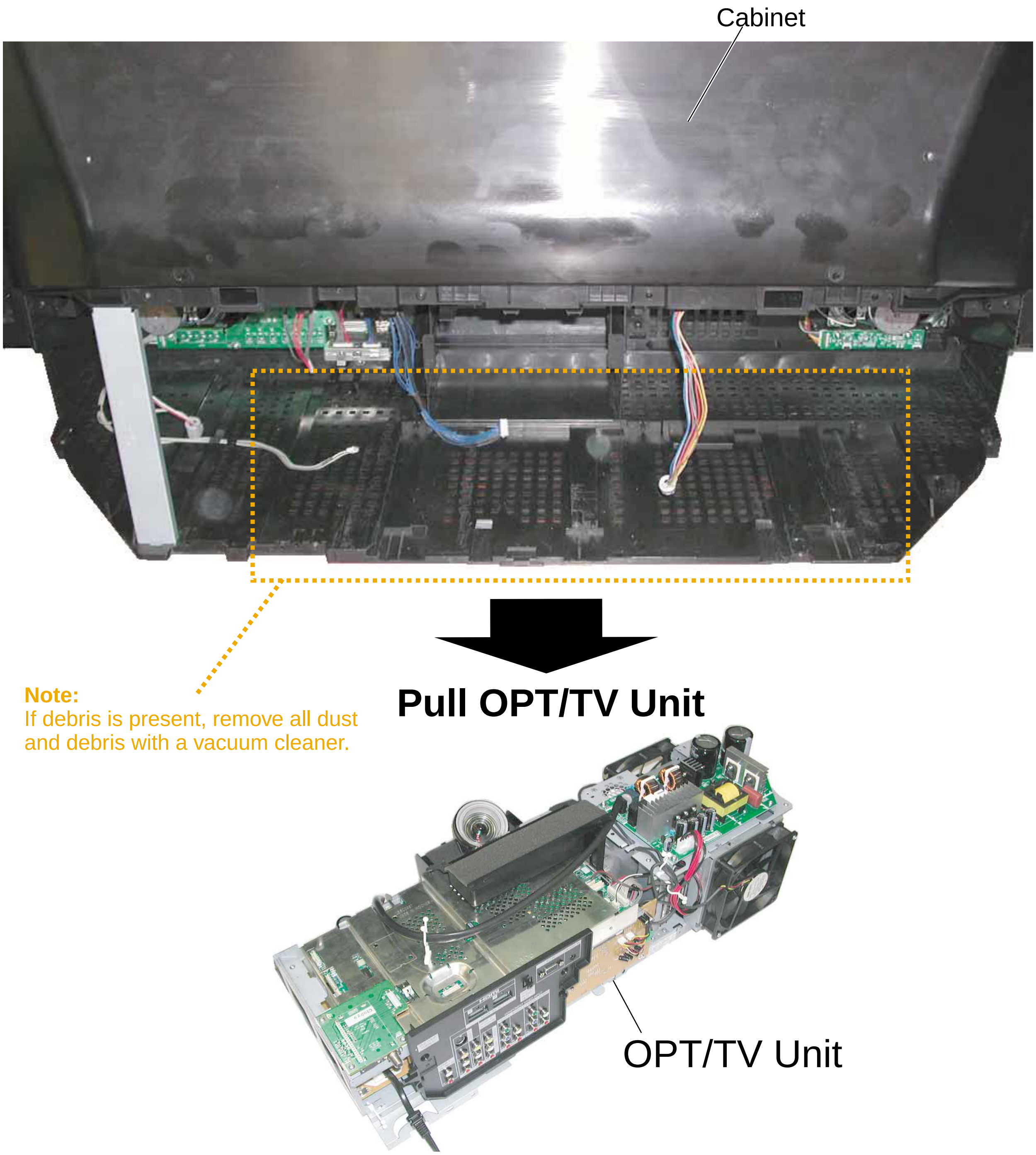

Locking Tab
401
401
CN4501
CN8201
CN5503
CN6003
CN3502
401
478
Support Shield
Check for debris here.
If debris is present, remove all dust and debris with a vacuum cleaner.

Fig. D1-2

Replacement Note of OPT/TV Unit:
After replacing the OPT/TV Unit, be sure to perform "ADJUSTMENT of OPT/TV Unit." Refer to "WHEN INSTALLING THE OPT/TV UNIT INTO THE UNIT AT THE USER’S LOCATION:."

3) Pull out the OPT/TV Unit.


Cabinet
Pull OPT/TV Unit
OPT/TV Unit

Note:
If debris is present, remove all dust and debris with a vacuum cleaner.

Fig. D1-3

c. Removal of Lamp Shield Case Ass'y with Fans

1. Remove the Thermal Fuse by removing the screw, and disconnect Connector CN1102.
2. Disconnect Connectors CN1, CN151, CN2751, CN2752, CN2753, CN6005 and release from the clampers.

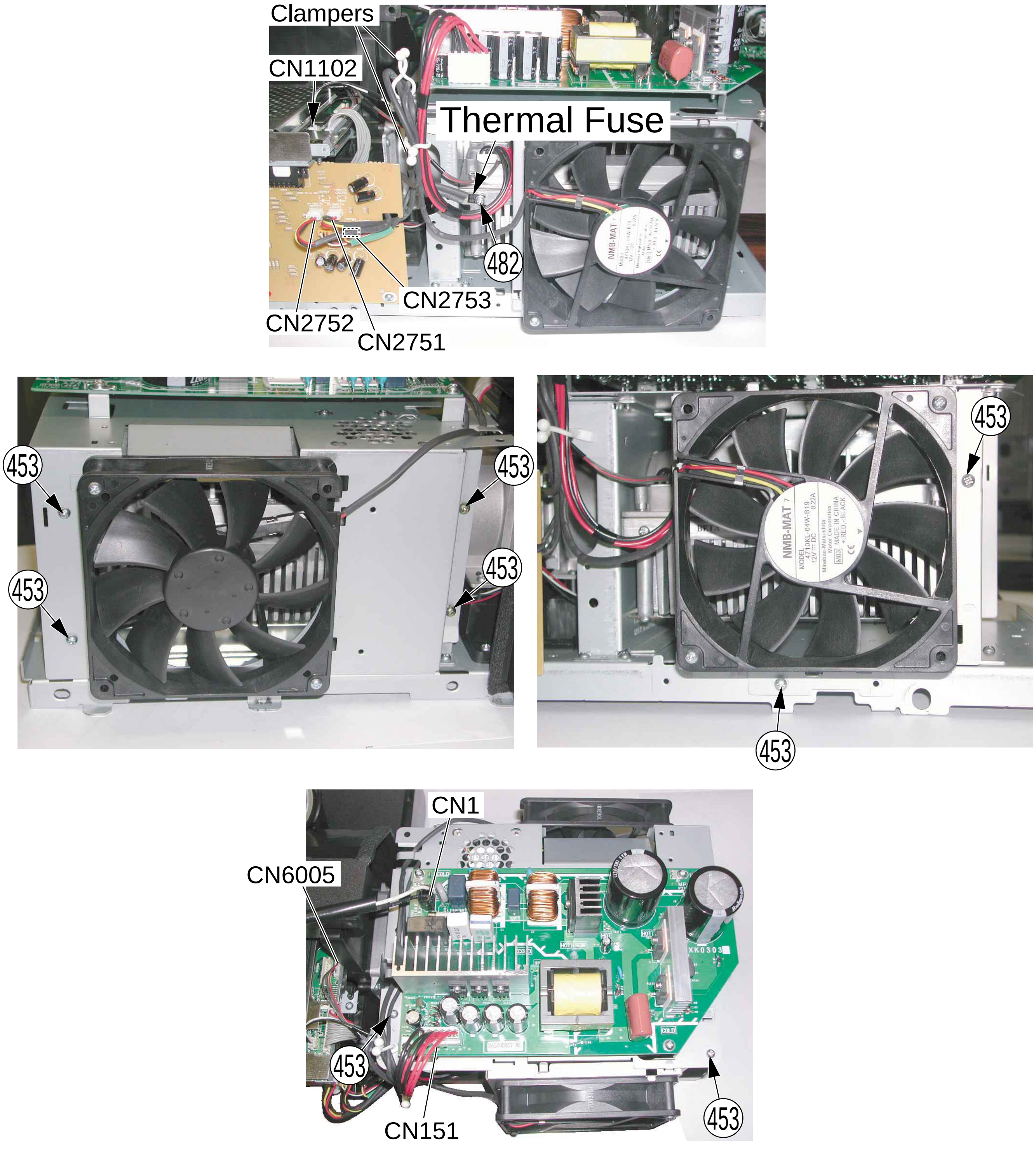
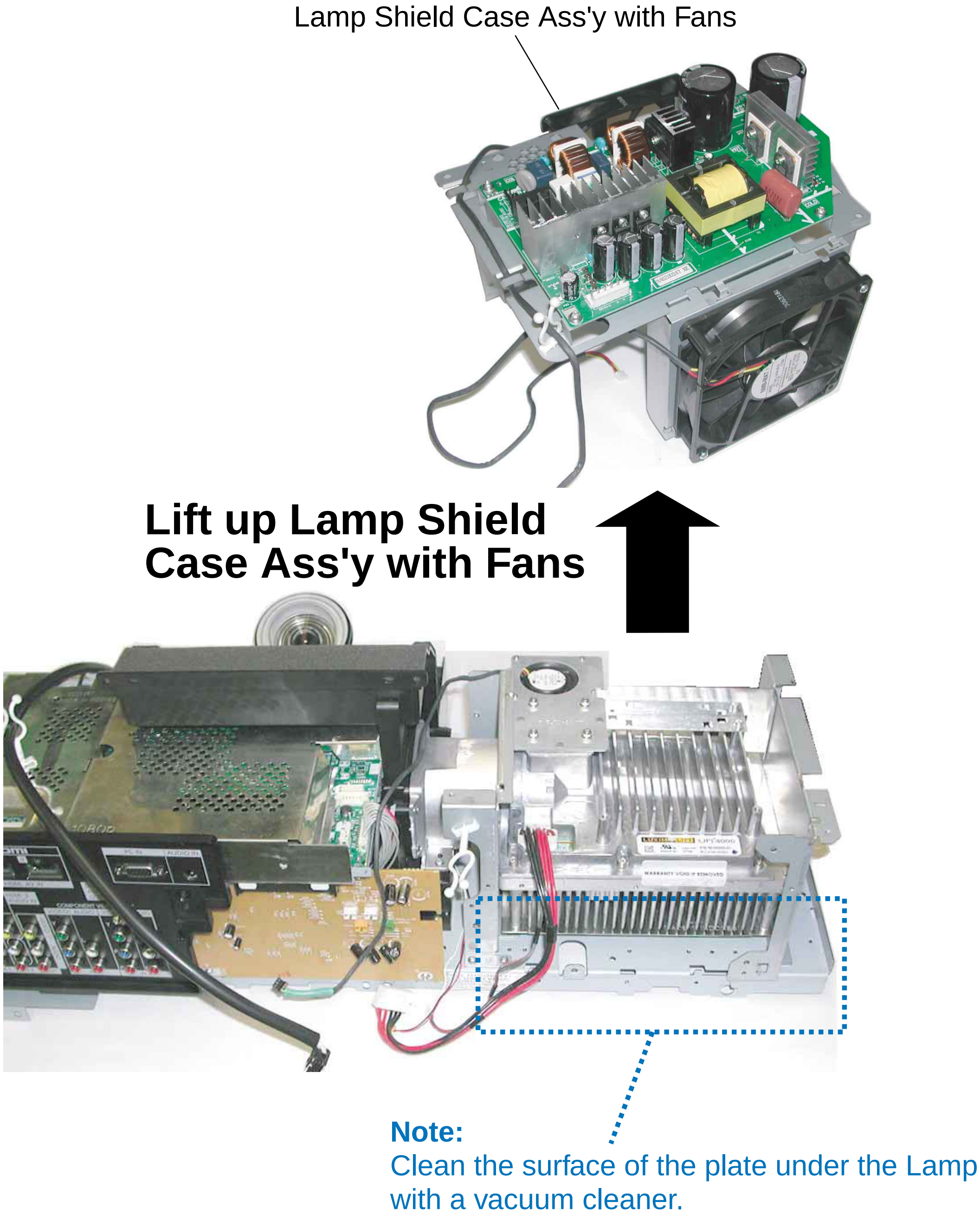

Clampers
CN1102
Thermal Fuse
482
CN2753
CN2752
CN2751
453
453
453
453
453
453
CN1
CN6005
453
453
CN151

Fig. D1-4

3. Remove the Lamp Shield Case Ass’y with Fans by removing the 8 screws.



Lamp Shield Case Ass'y with Fans

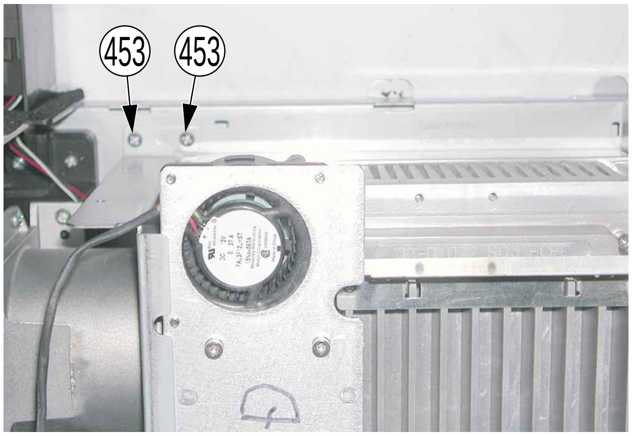
Lift up Lamp Shield Case Ass'y with Fans

Note:
Clean the surface of the plate under the Lamp with a vacuum cleaner.

Fig. D1-5

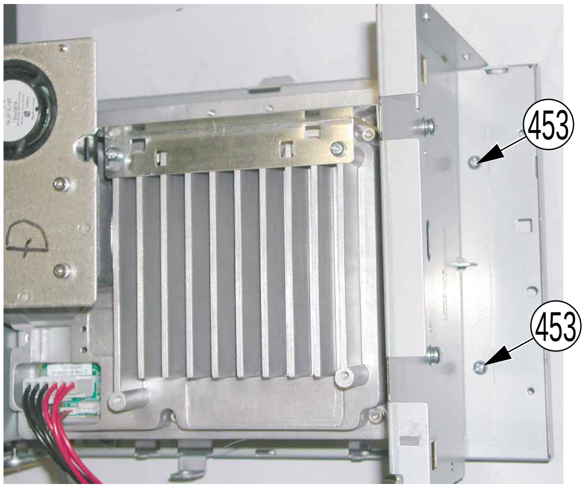
d. Removal of Lamp Unit

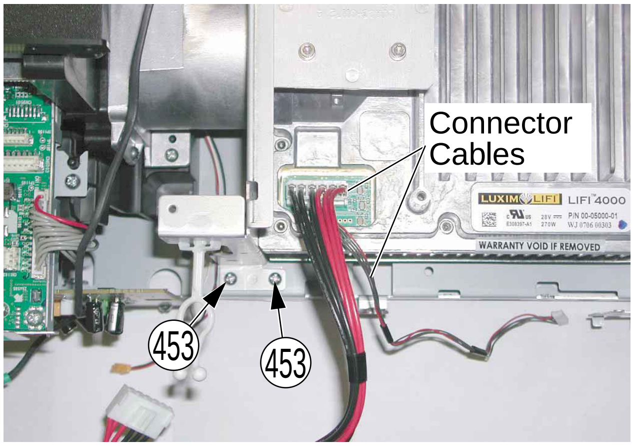
1. Disconnect two connector cables from the Lamp Ass’y.
2. Remove the Lamp Ass’y by removing the 6 screws.

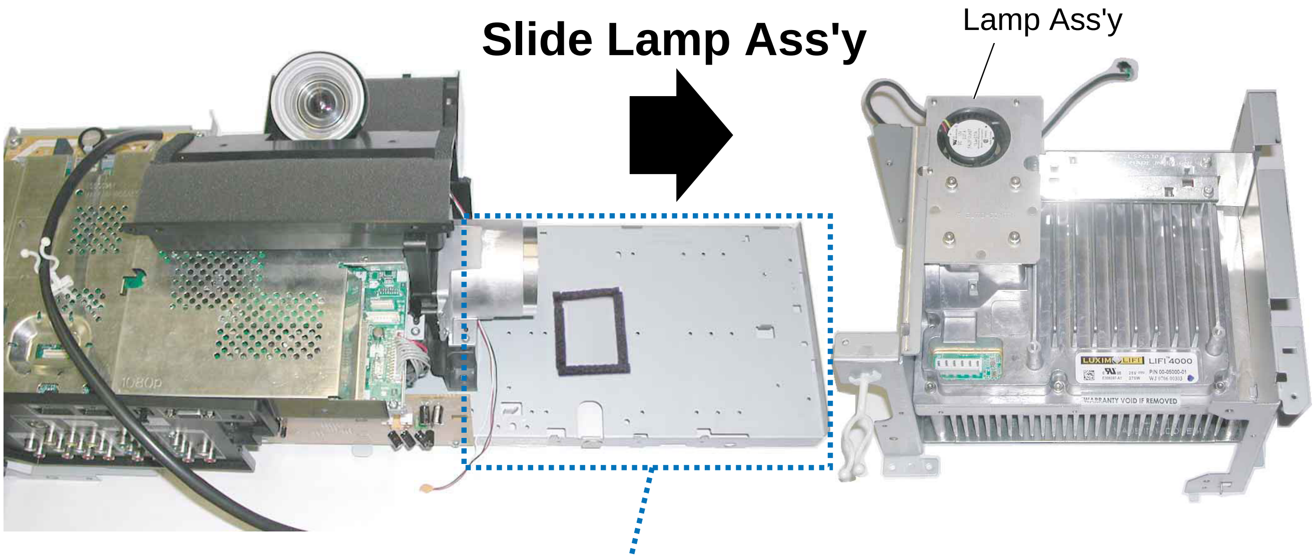


LAMP CAUTION:

The Lamp Unit becomes very hot during operation. When replacing the Lamp Unit, wait until it has cooled off (1 hour or more).



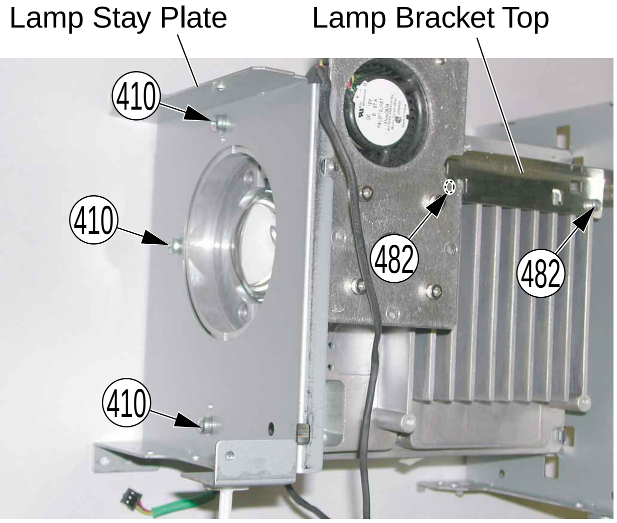

Connector Cables
LUXIM LIFI LIFI 4000
WARRANTY VOID IF REMOVED
453
453

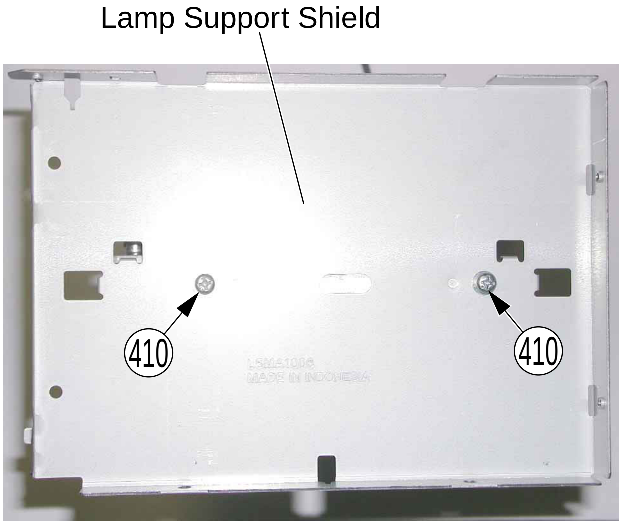

Slide Lamp Ass'y
Lamp Ass'y

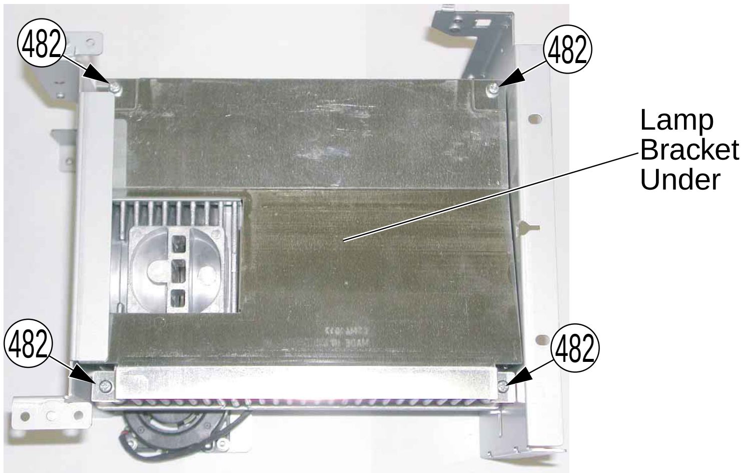
Note:
Clean the surface of the plate with a vacuum cleaner, after removing the Lamp Unit.

Fig. D1-6

3. Remove the 4 plates (Lamp Stay Plate, Lamp Bracket Top, Lamp Support Shield and Lamp Bracket Under) by removing the 11 screws.

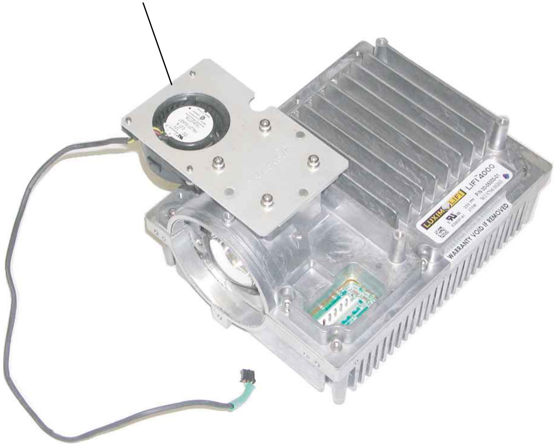

Lamp Stay Plate
Lamp Bracket Top
410
410
410
482
482


Lamp Support Shield
410
410


482
482
Lamp Bracket Under
482
482

<Lamp Unit>

The Lamp Unit includes the Lamp Fan.



<Bottom View>

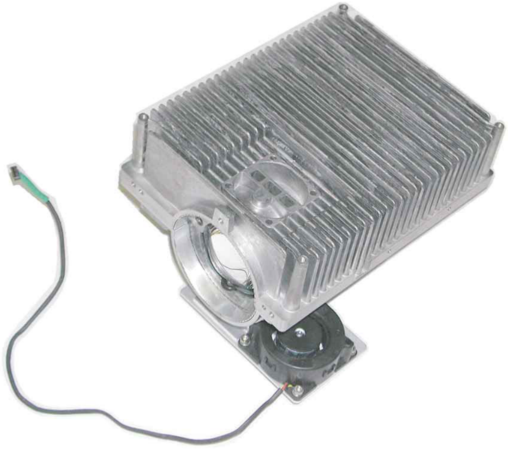


Fig. D1-7

e. Removal of Lamp Fan

1. Remove the Lamp Fan from the Lamp Ass'y by removing the 7 screws using the Hex Wrench (2.5 mm).

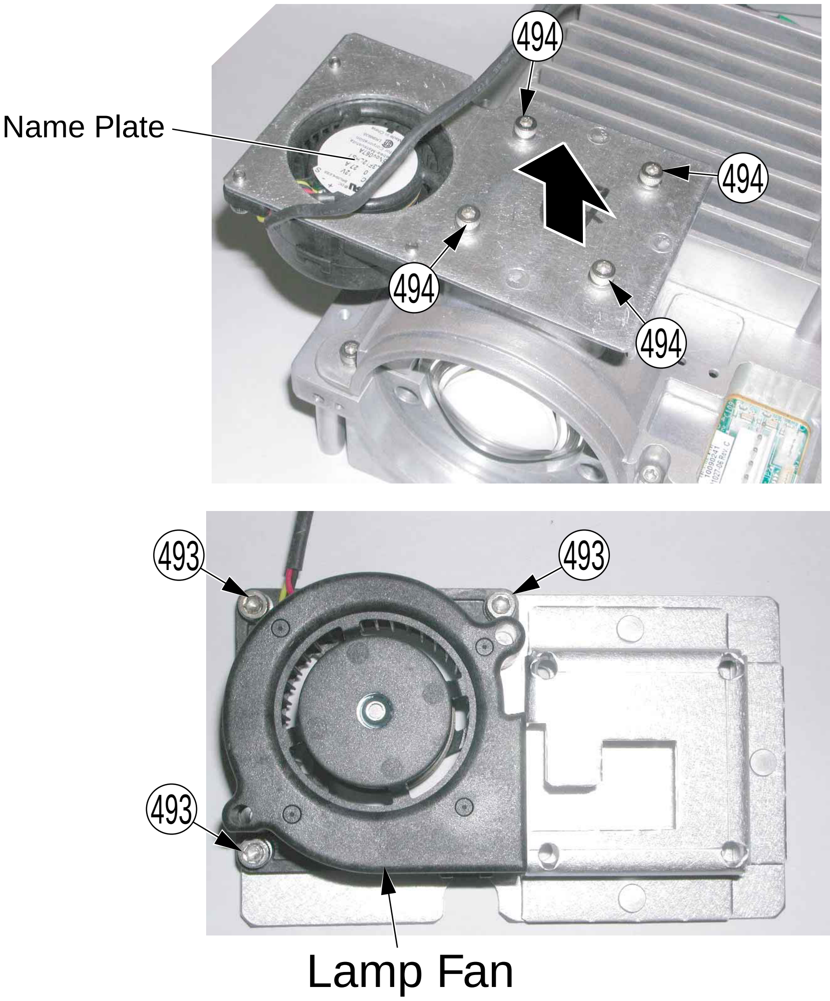

494
Name Plate
494
494
494
493
493
493
Lamp Fan

Fig. D1-8

Reassembly Note for Lamp Shield Case Ass'y:
Before installing the Lamp Shield Case Ass'y with Fans, wire the Lamp Fan Cable and the Front Fan Cable as shown.

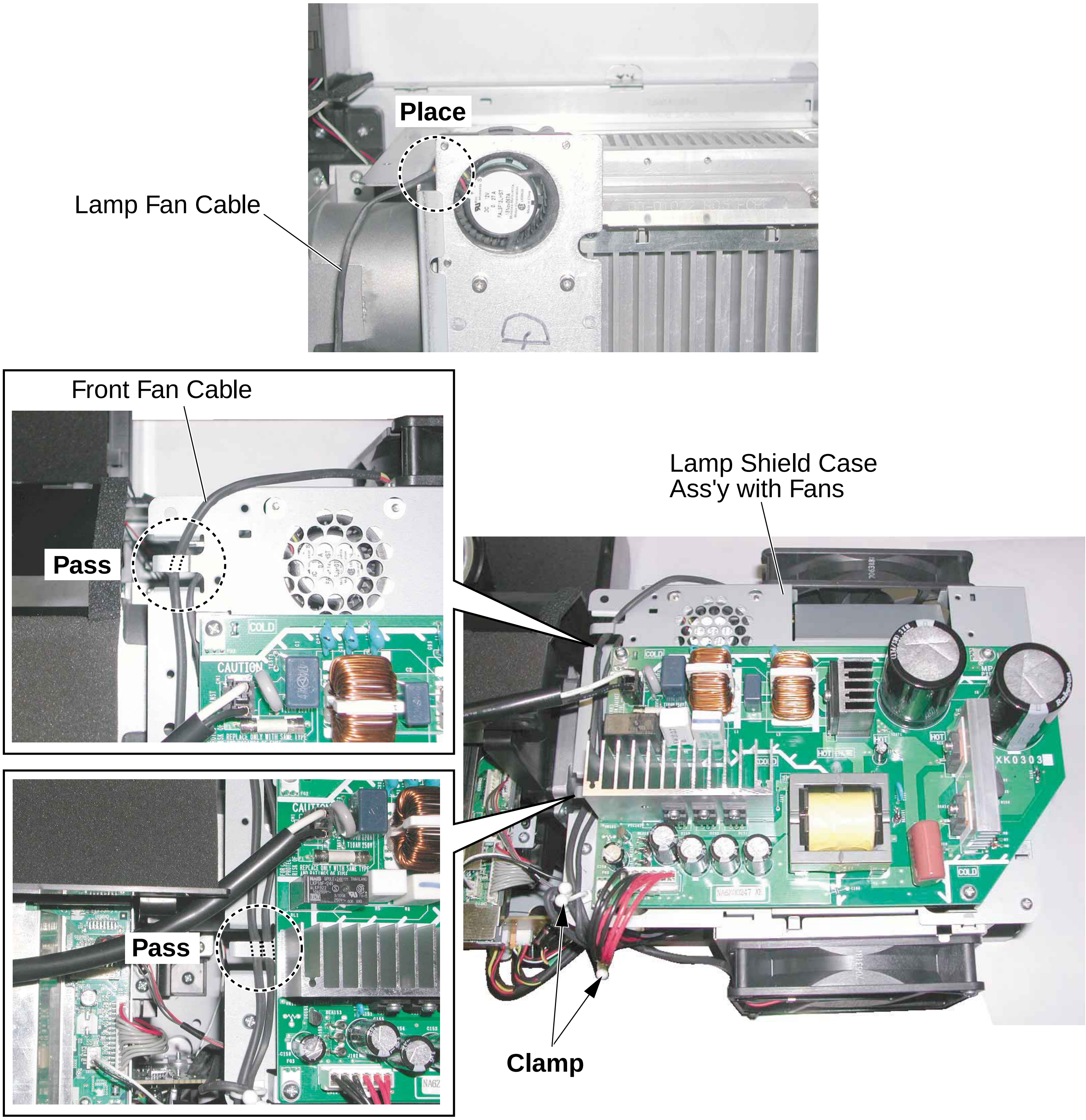

Place
Lamp Fan Cable
Front Fan Cable
Pass
Lamp Shield Case Ass'y with Fans
Pass
Clamp

Fig. D1-9

REMOVAL OF THE OPT/TV UNIT

1. Remove the right Support Shield by releasing the Locking Tab.
2. 1) Remove the 4 screws.
   2) Disconnect Connectors CN3502 (Ope), CN4501 (Speaker), CN5503 (SD), CN6003 (Power SW) and CN8201 (HDMI).

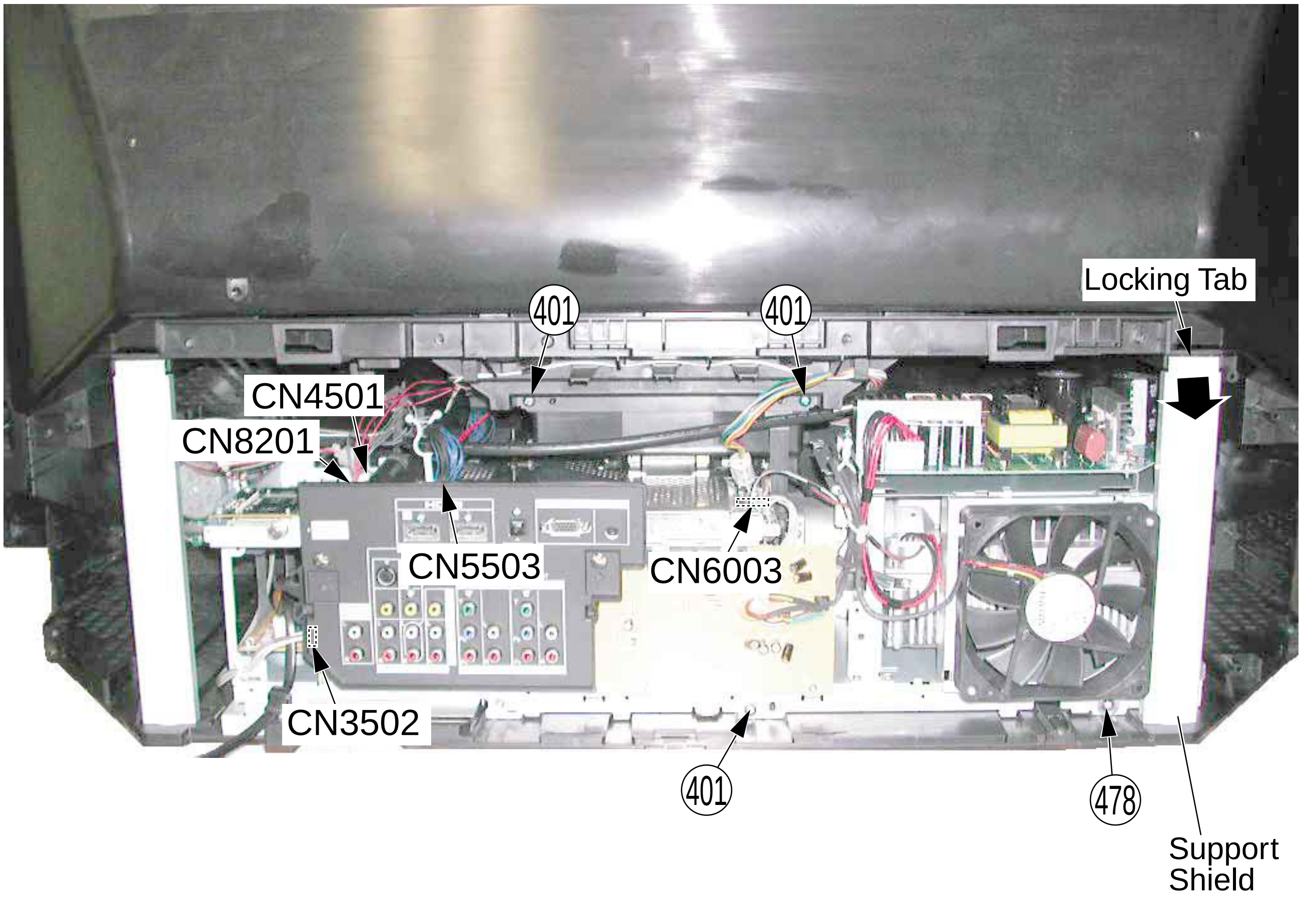

Locking Tab
401
401
CN4501
CN8201
CN5503
CN6003
CN3502
401
478
Support Shield

Fig. D2-1

3) Pull out the OPT/TV Unit.

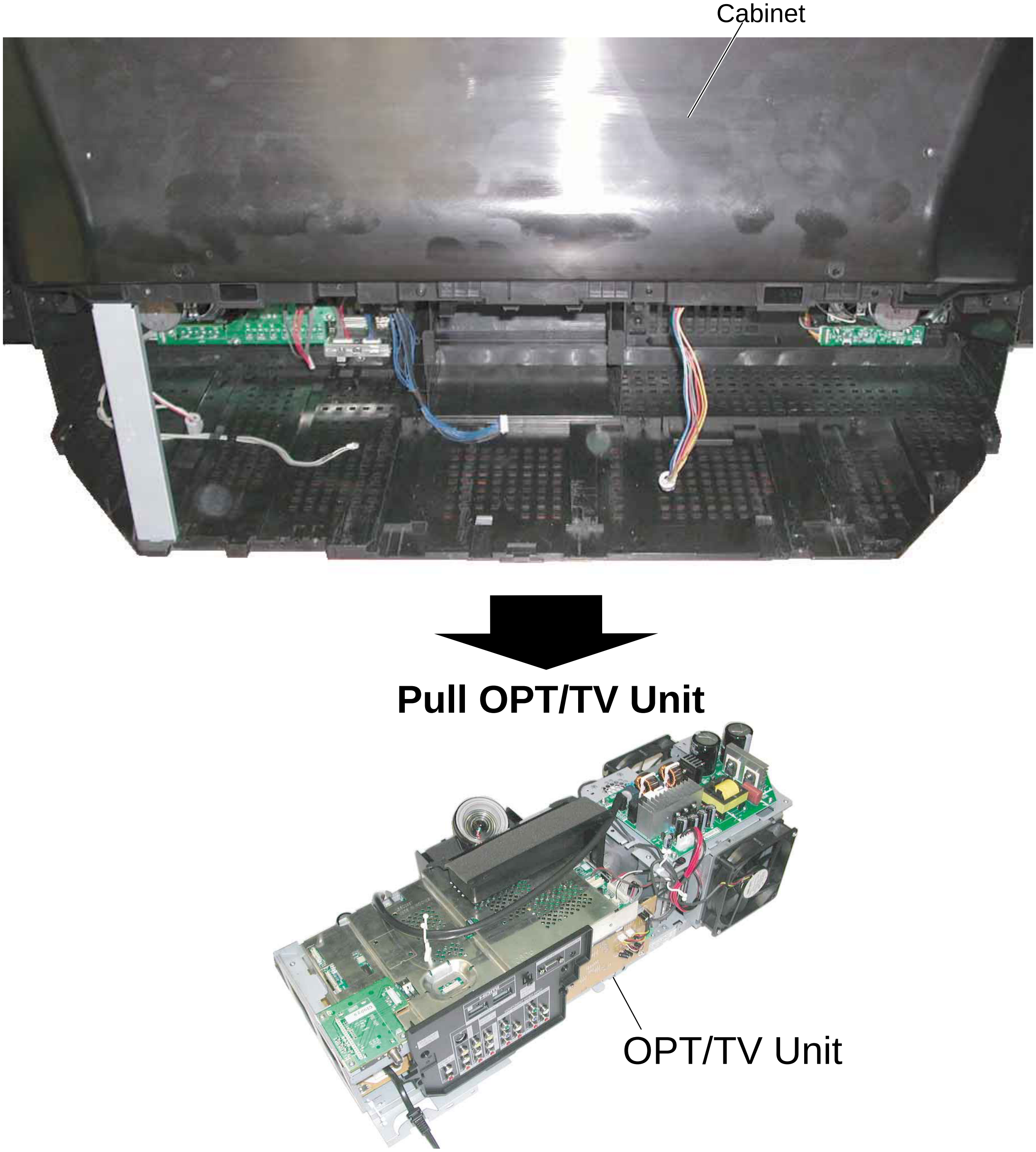

Cabinet
Pull OPT/TV Unit
OPT/TV Unit

Fig. D2-2

REMOVAL OF THE RF AMP POWER SUPPLY P.C.B.

1. Remove the OPT/TV Unit. Refer to Steps 1~2 in "REMOVAL OF THE OPT/TV UNIT."
2. 1) Disconnect Connectors CN151, CN1 on the RF AMP Power Supply P.C.B.
   2) Remove the RF AMP Power Supply P.C.B. by removing the 4 screws and the spacer.

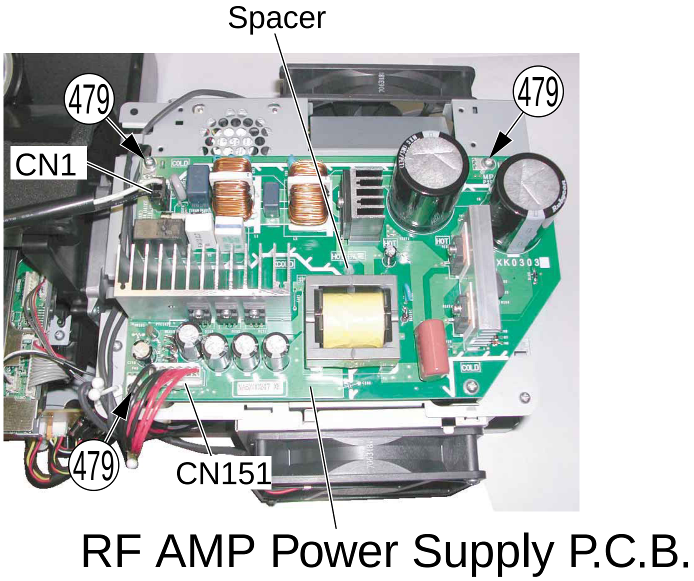

Spacer
479
479
CN1
479
CN151
RF AMP Power Supply P.C.B.

Fig. D3-1

REMOVAL OF THE FRONT FAN AND THE REAR FAN

1. Remove the OPT/TV Unit. Refer to Steps 1~2 in "REMOVAL OF THE OPT/TV UNIT."
2. Disconnect Connector CN2752 and remove the Rear Fan by removing the 2 screws.
3. Disconnect Connector CN2751 and remove the Front Fan by removing the 2 screws.

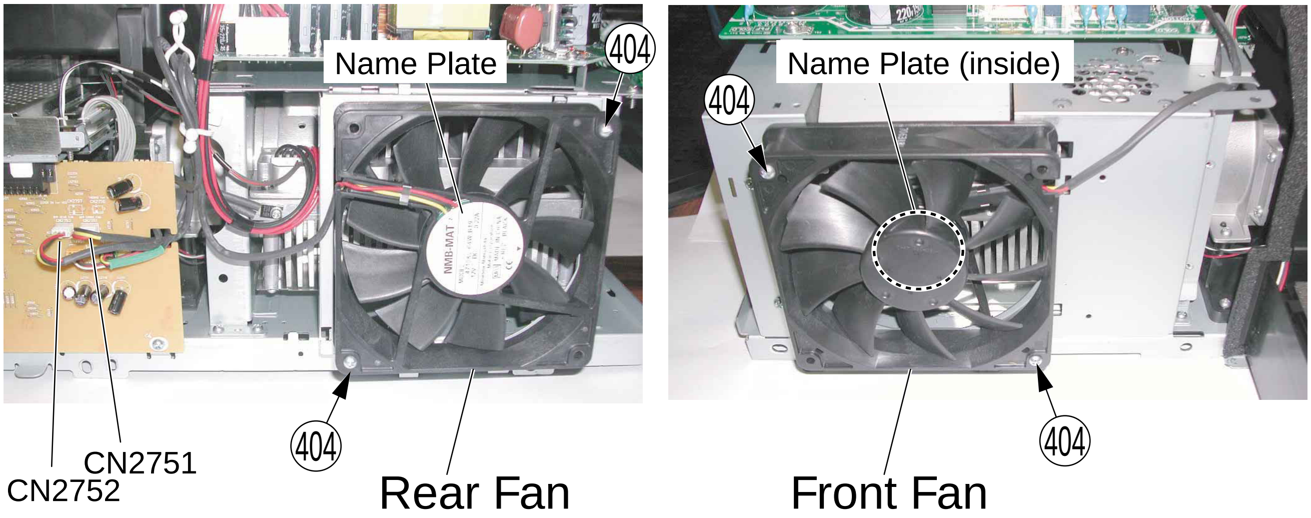

Name Plate
404
Name Plate (inside)
404
CN2751
CN2752
404
Rear Fan
Front Fan
404

Fig. D3-2

REMOVAL OF THE TUNER P.C.B., THE REAR JACK P.C.B. AND THE POWER P.C.B.

1. Remove the OPT/TV Unit. Refer to Steps 1~2 in "REMOVAL OF THE OPT/TV UNIT."
2. Remove the Tuner P.C.B. by removing the 3 screws (CN8970 is disconnected).
3. 1) Remove the Rear Jack Holder by removing the 6 screws.
   2) Disconnect Connectors CN2751, CN2752, CN2753, CN2754.
   3) Disconnect Connector CN3501 and remove the Rear Jack P.C.B. by removing the 5 screws.

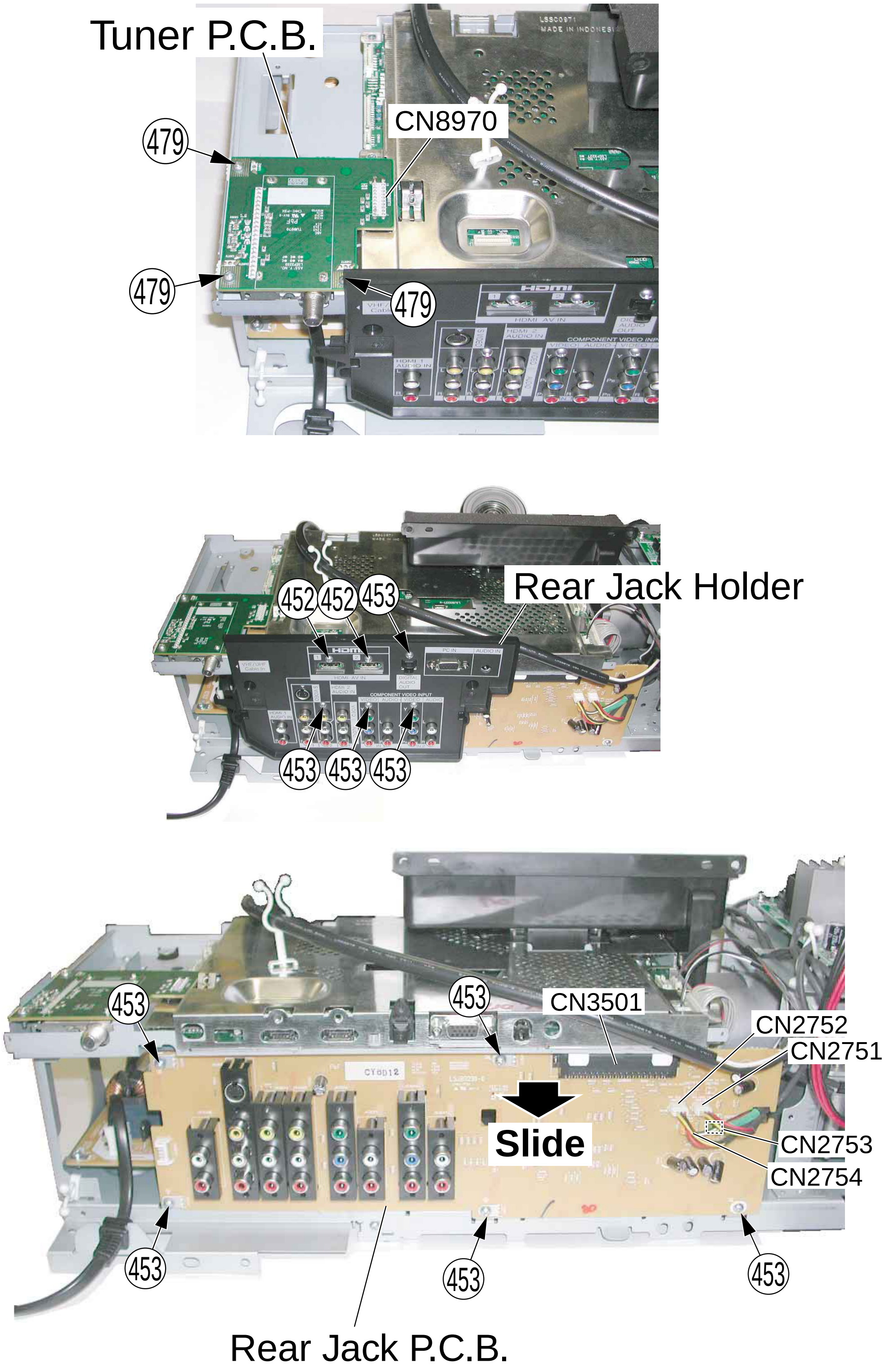
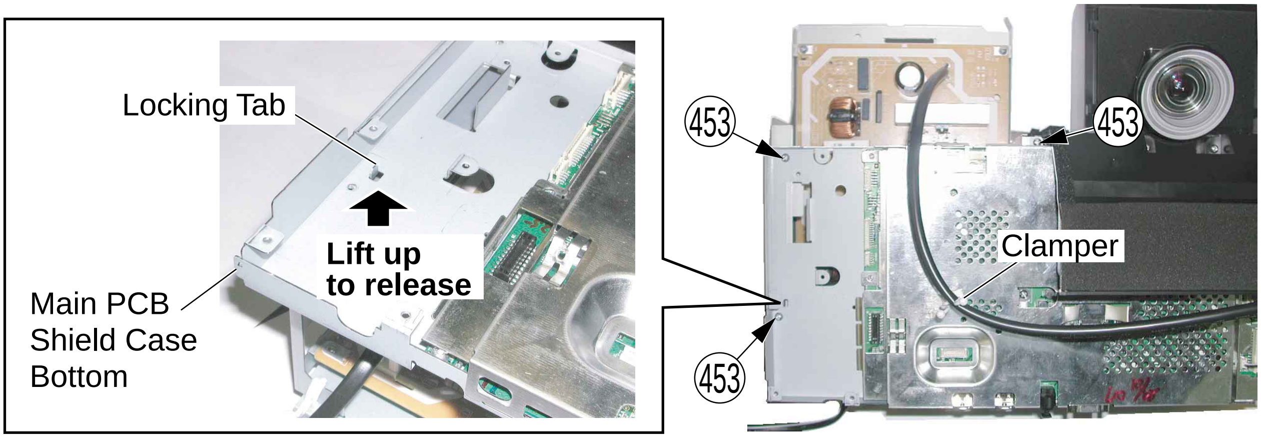
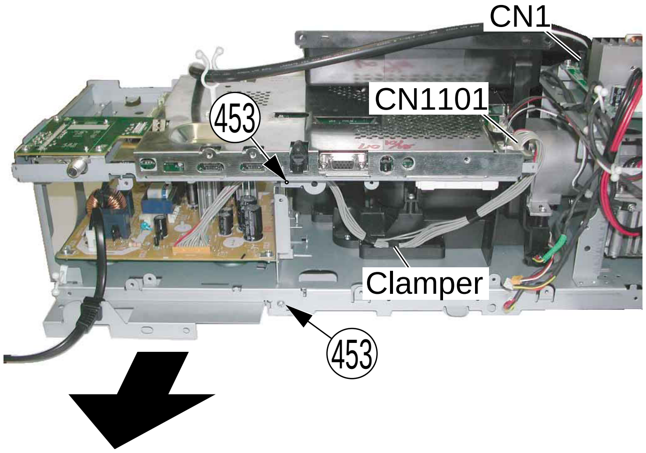

Tuner P.C.B.
CN8970
479
479
479
452
452
453
Rear Jack Holder
453
453
453
453
453
CN3501
CN2752
CN2751
Slide
CN2753
CN2754
453
453
453
Rear Jack P.C.B.

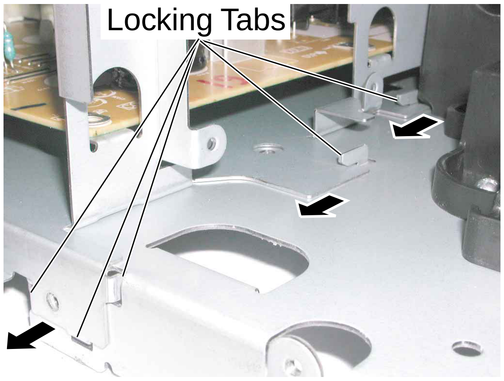
Fig. D4-1

4. 1) Disconnect Connectors CN1, CN1101 and remove the 5 screws.
   2) Slide out the Power P.C.B. with the Shield together while releasing the 6 locking tabs.


Locking Tab
Lift up to release
Main PCB Shield Case Bottom
453
453
Clamper
453


CN1
453
CN1101
Clamper
453

Slide Power P.C.B. with Shield forward


Locking Tabs

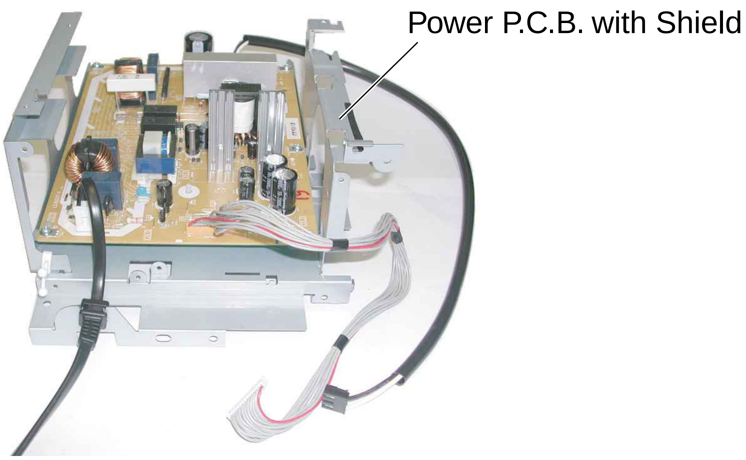
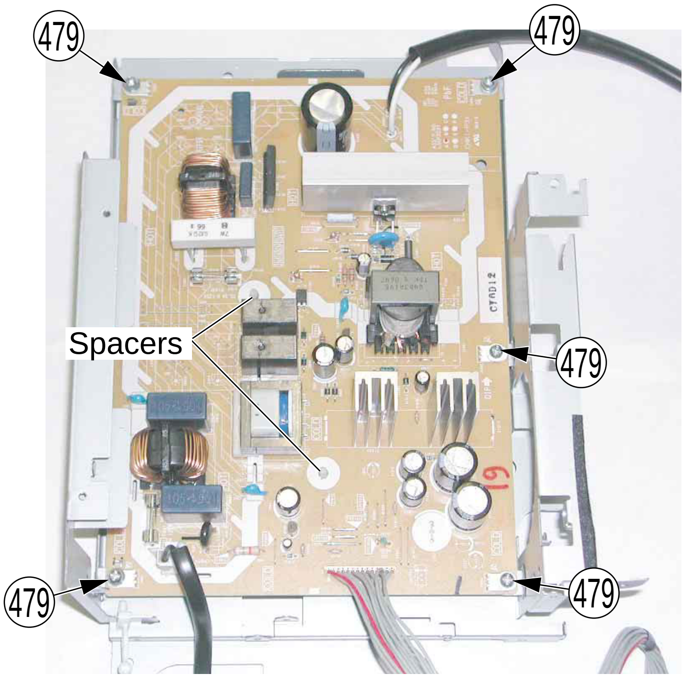

Power P.C.B. with Shield

Fig. D4-2

3) Remove the Power P.C.B. by removing the 5 screws and the 2 spacers, then disconnect the AC Cord.


479
479
Spacers
479
479
479

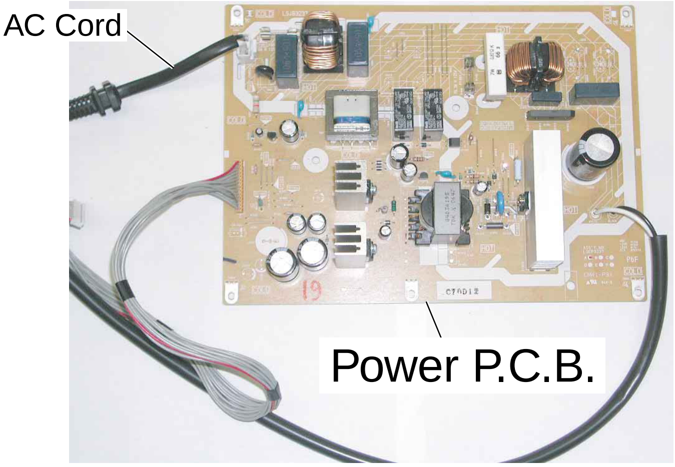

AC Cord
Power P.C.B.

Fig. D4-3

REMOVAL OF THE FRONT COVER UNIT AND THE DISPLAY

1. Remove the Rear Cover. Refer to Step a in "HOW TO REPLACE THE LAMP UNIT."
2. 1) Open the Front Door about 45 degrees and remove it by releasing the 2 Locking Tabs.
   2) Remove the 2 screws from the rear side, and the screw from the front side.
   3) Remove the Front Cover Unit by releasing the 4 Locking Tabs in that order.

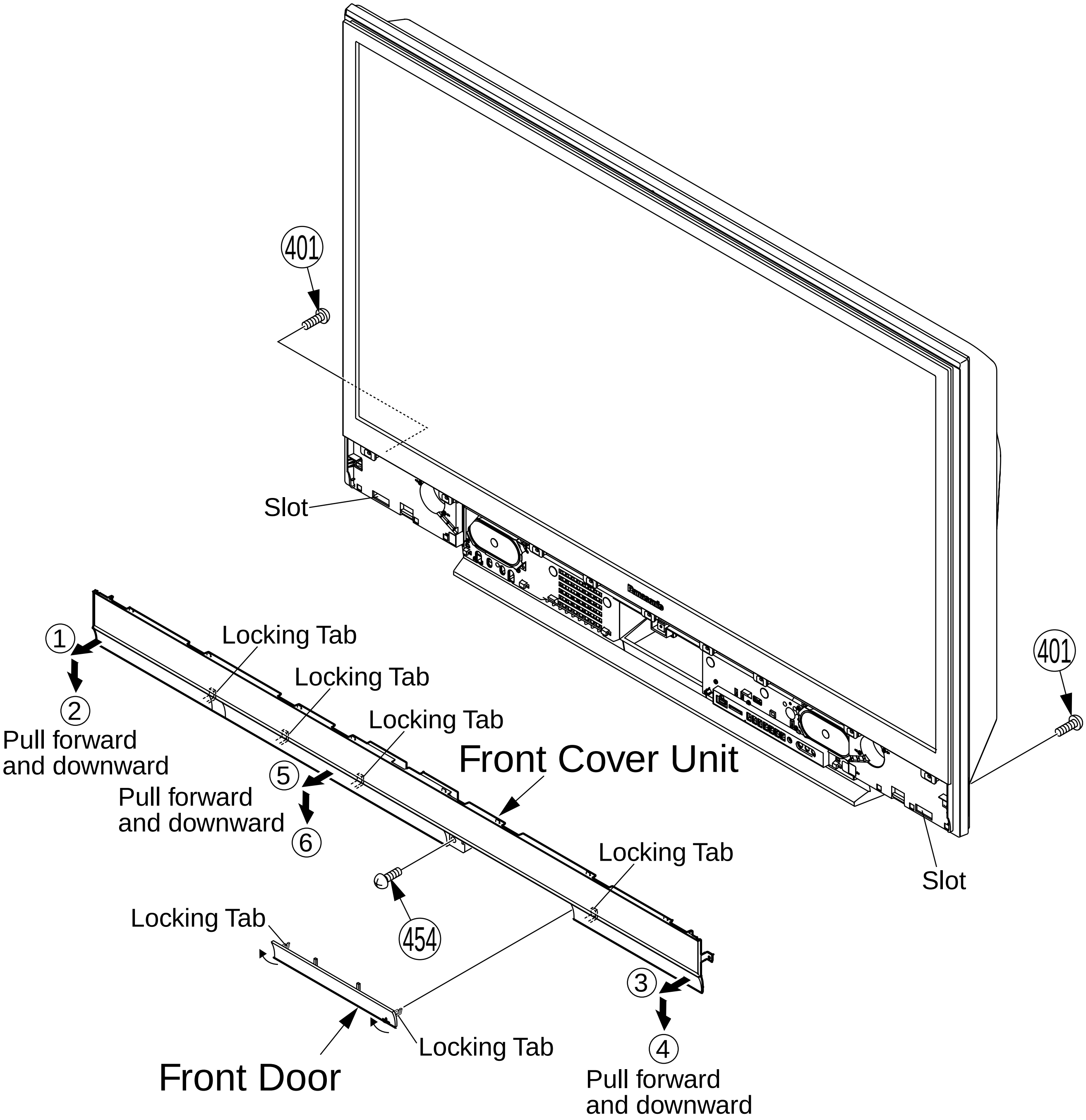
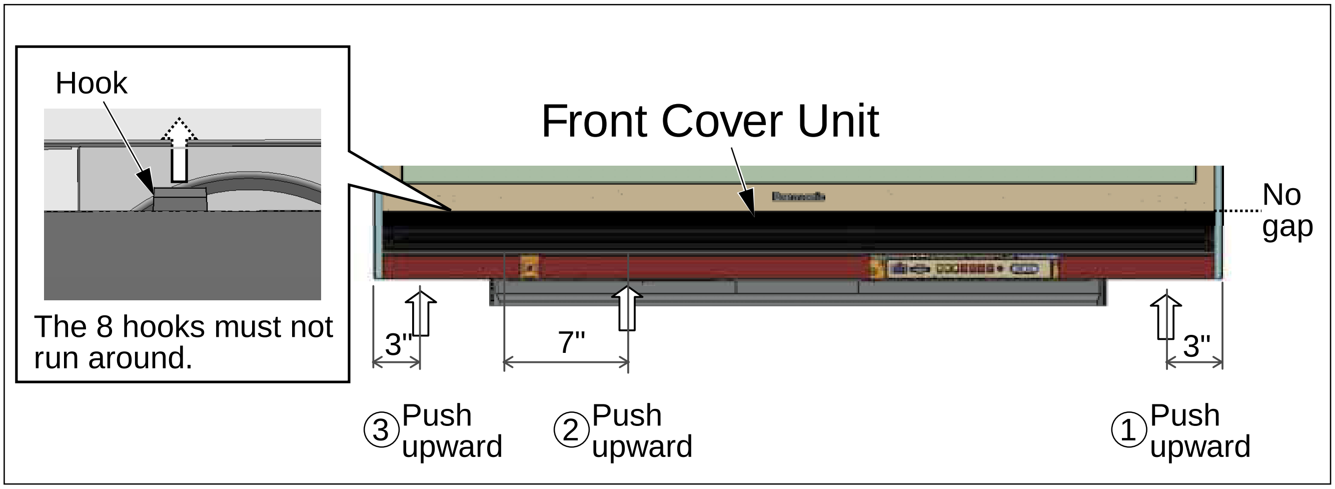

401
Slot
①
Locking Tab
Locking Tab
②
Pull forward
and downward
Locking Tab
Front Cover Unit
⑤
Pull forward
and downward
⑥
Locking Tab
401
Slot
Locking Tab
454
③
Locking Tab
④
Front Door
Pull forward
and downward

Fig. D5-1

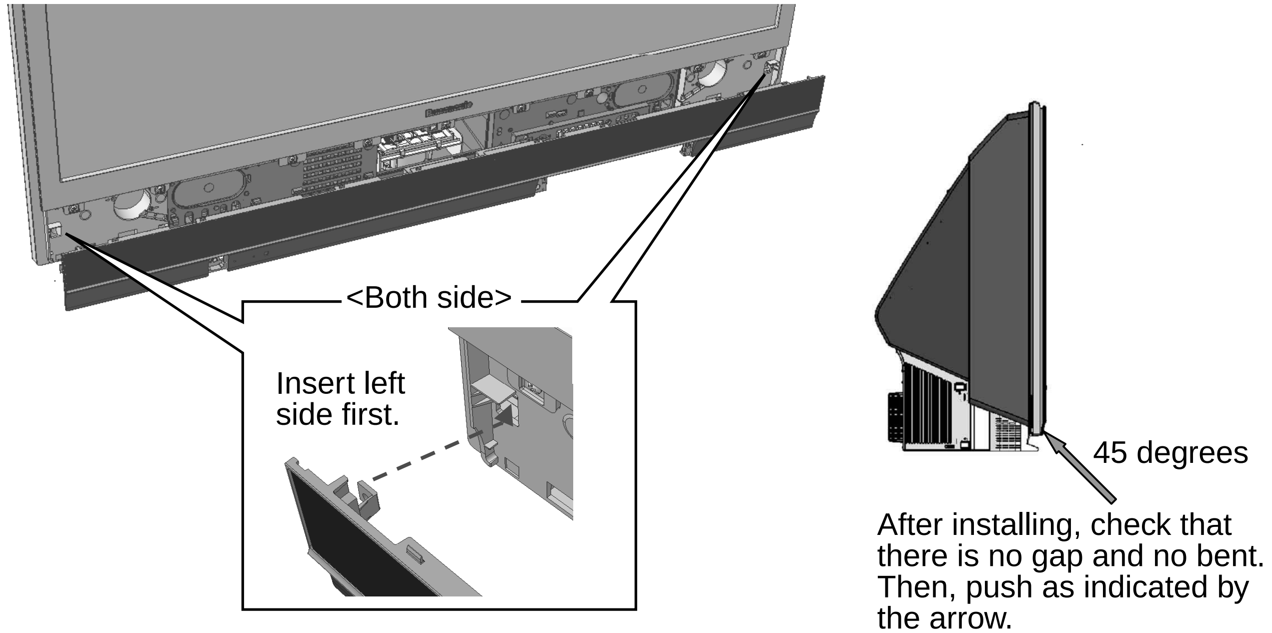
Reassembly Note for Front Cover Unit:

(For 50 inch models)


Hook
Front Cover Unit
No gap
3"
7"
3"
③ Push upward
② Push upward
① Push upward

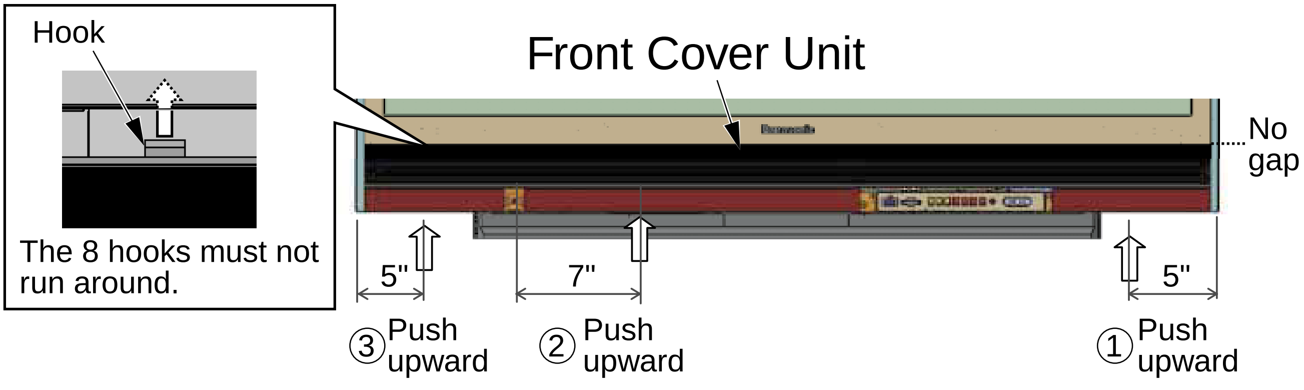
The 8 hooks must not run around.

(For 56/61 inch models)



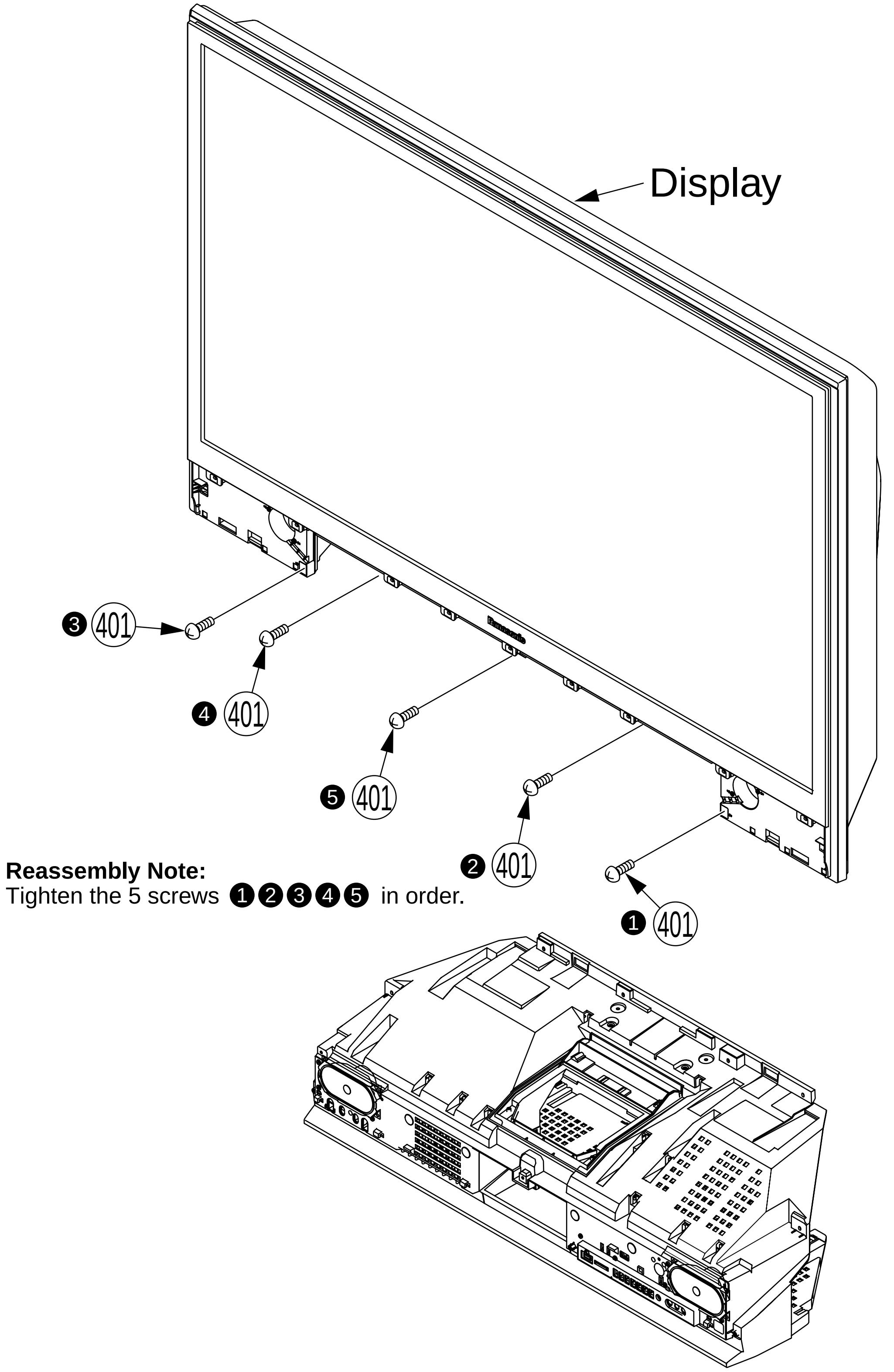
Insert left side first.

After installing, check that there is no gap and no bent. Then, push as indicated by the arrow.


Hook
Front Cover Unit
No gap
5"
7"
5"
③ Push upward
② Push upward
① Push upward

The 8 hooks must not run around.

3. 1) To remove Display, remove the 5 screws from front side.
   2) Lift up the Display.


Display
❸ 401
❹ 401
❺ 401
❷ 401
❶ 401
Panasonic

Reassembly Note:
Tighten the 5 screws ❶❷❸❹❺ in order.

Fig. D5-2

REMOVAL OF THE SCREEN UNIT FROM THE DISPLAY

1. Remove the Display. Refer to Steps 1 ~ 3 in "REMOVAL OF THE DISPLAY."
2. Remove the Screen Unit by removing the 14 screws.

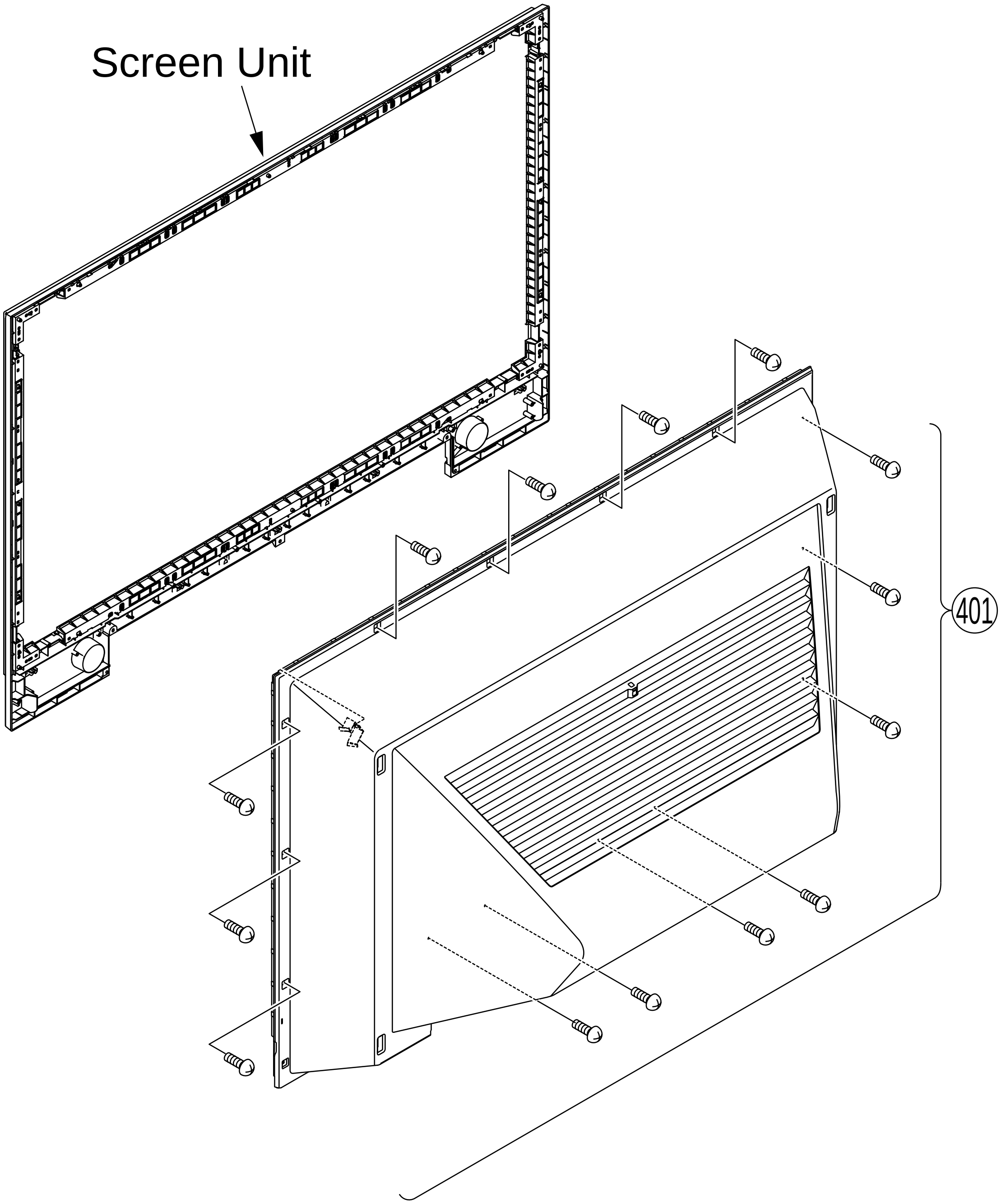


Fig. D6-1

3. 1) Remove the 4 Screen Support Corners, 2 Screen Support H Units and the 2 Screen Support V Units by removing the 22 screws.
   2) Remove the Fresnel Lens and the Lenticular Screen.

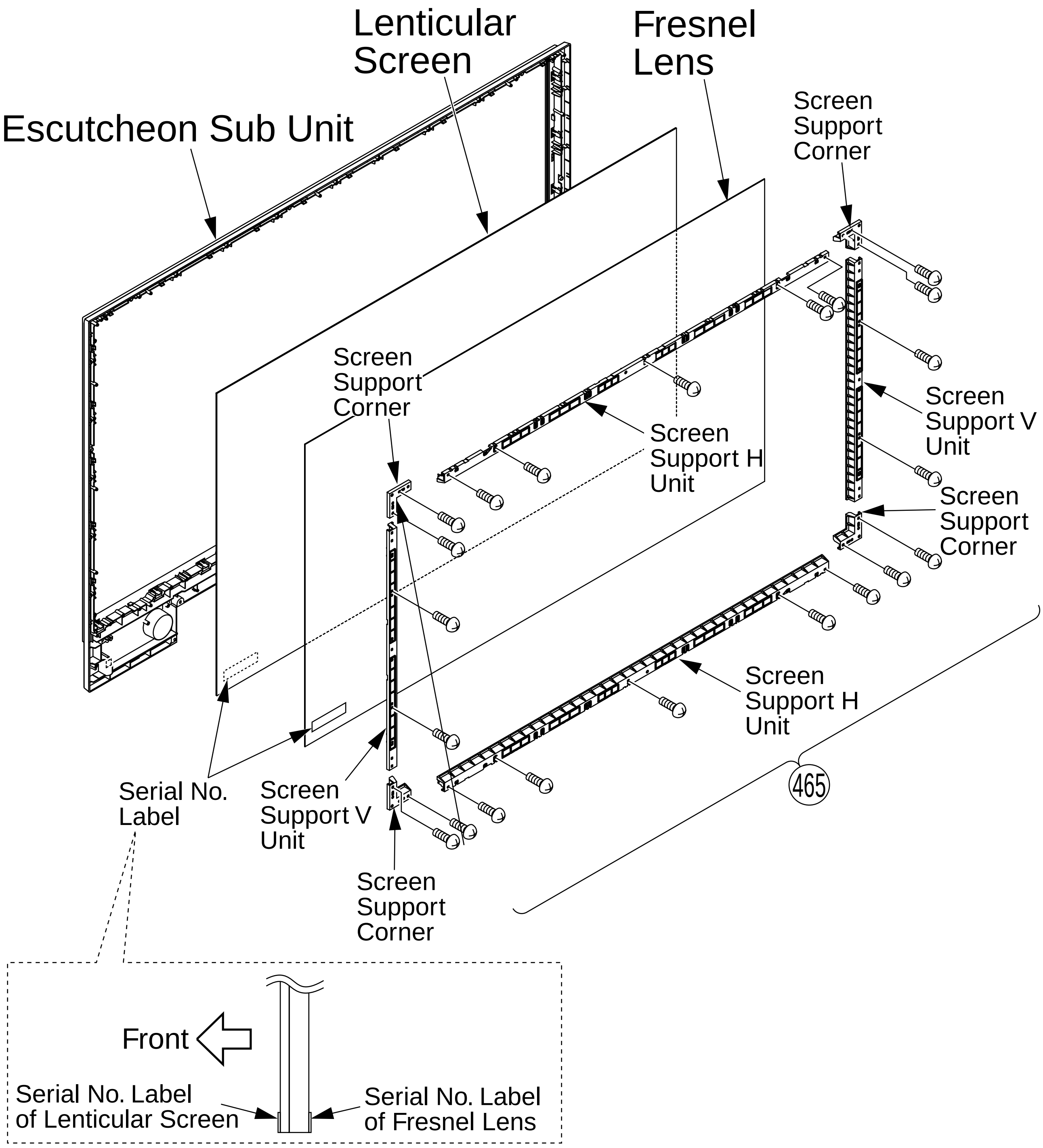

Lenticular Screen
Fresnel Lens
Escutcheon Sub Unit
Screen Support Corner
Screen Support Corner
Screen Support V Unit
Screen Support H Unit
Screen Support Corner
Screen Support H Unit
465
Serial No. Label
Screen Support V Unit
Screen Support Corner
Front
Serial No. Label of Lenticular Screen
Serial No. Label of Fresnel Lens

Fig. D6-2

Replacement Note for Screen Units:
When replacing the Fresnel Lens and the Lenticular Screen, it is imperative that dust, etc., does not adhere between the Fresnel Lens and the Lenticular Screen. Due to this risk, it is strongly recommended to replace the Screen Unit as a unit.

8 Measurements and Adjustments

8.1. Adjustment Procedures 1

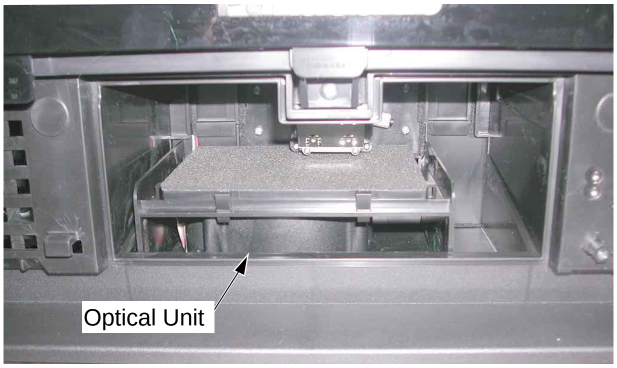
WHEN INSTALLING THE OPT/TV UNIT INTO THE UNIT AT THE USER'S LOCATION:

The following ADJUSTMENT of the OPT/TV Unit must be performed.

a. Focus Adjustment
   Note:
   The Focus Adjustment is not normally necessary when reinstalling.
   However, the Focus Adjustment should be performed when replacing the new OPT/TV Unit.
b. Mechanical Picture Position Adjustment (Tilt)
c. Electrical Picture Position Adjustment (H/V)

Adjustment Preparation:

1. Install all parts except the Front Cover Unit and the Front Door.

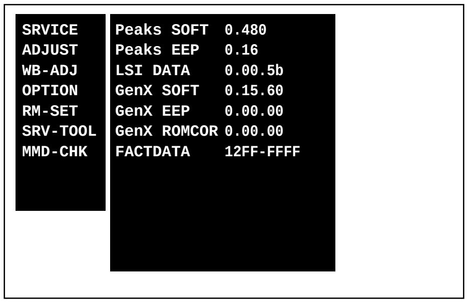


<Front View>

Fig. M1-1

Note:
When the rear cover is disassembled, the screen can be moved back and forth, which could affect the video display vertical position. This could also cause the vertical adjust to be at or near its limit.
Only try the picture position adjustment with the rear cover assembled!

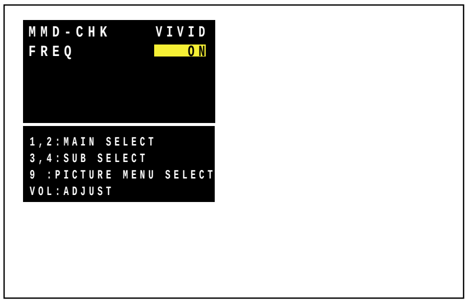
2. Turn the power on.
3. To enter Service Adjust Mode, hold the VOLUME DOWN button on the unit and press the RECALL key three times in power on condition.



```
SRVICE     Peaks SOFT  0.480
ADJUST     Peaks EEP   0.16
WB-ADJ     LSI DATA    0.00.5b
OPTION     GenX SOFT   0.15.60
RM-SET     GenX EEP    0.00.00
SRV-TOOL   GenX ROMCOR 0.00.00
MMD-CHK    FACTDATA    12FF-FFFF
```

<Main Menu>

4. Press the 2 key to go to MMD-CHK 1/8 screen.

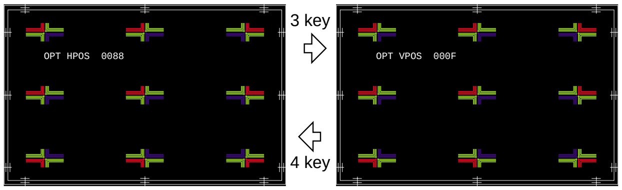


```
MMD-CHK      VIVID
FREQ            ON

1,2:MAIN SELECT
3,4:SUB SELECT
9 :PICTURE MENU SELECT
VOL:ADJUST
```

<MMD-CHK 1/8>

5. Press the 3 key to go to "Picture Position Screen."
6. Perform the adjustments.



```
OPT HPOS  0088
```

```
OPT VPOS  000F
```

<MMD-CHK 2/8> **<MMD-CHK 3/8>**

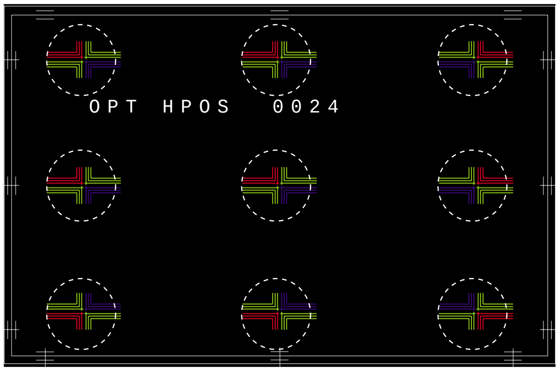
(Picture Position for Horizontal) **(Picture Position for Vertical)**

To release this mode:

1. After changing the value of OPT HPOS/OPT VPOS, the adjustment data will be written to the EEPROM.
2. Press 1 key to return to the Main Menu or turn off the power.
3. Install the Front Cover Unit with the screws and the Front Door.

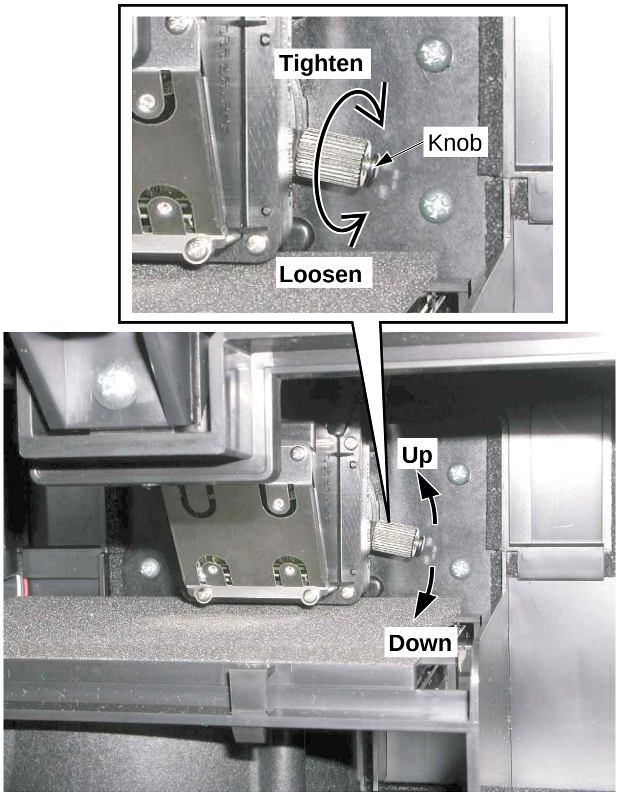
a. Focus Adjustment

1) Confirm that each of the pixels in the nine portions are clearly visible.


OPT HPOS 0024

<MMD-CHK 2/8>

2) If not, loosen the Knob on the Projection Lens until the Knob can be moved.

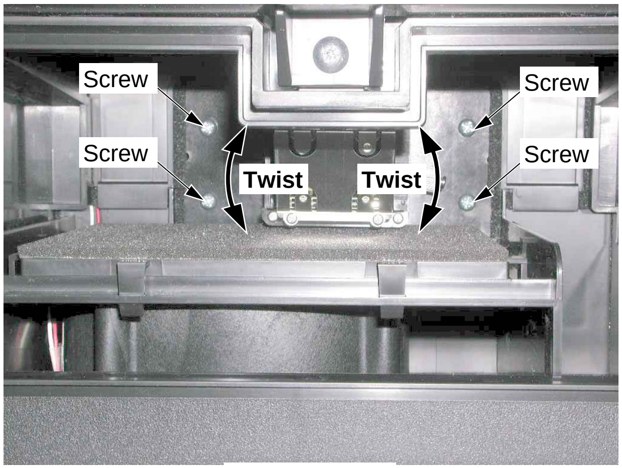

Tighten
Knob
Loosen
Up
Down

<Front View>
Fig. M1-6

3) Adjust the Knob by moving up or down so that each of the pixels in the nine portions is clearly visible to obtain the best focus.
4) Tighten the Knob.

b. Mechanical Picture Position Adjustment (Tilt)

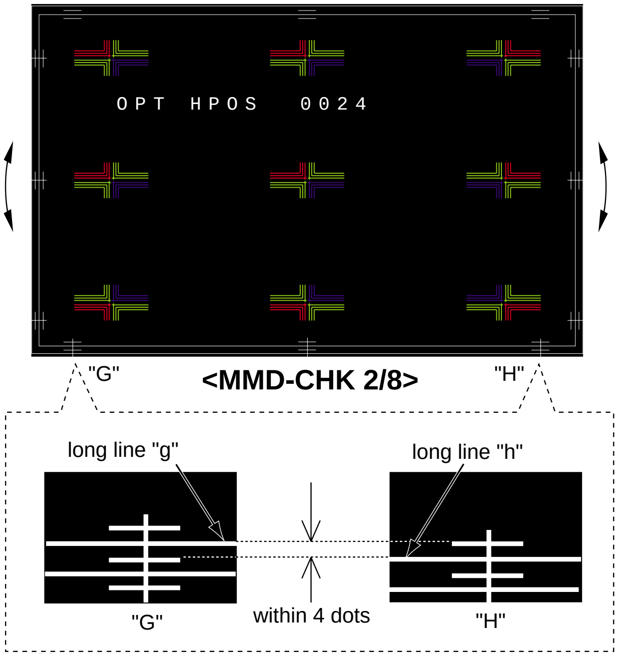
1) Loosen the 4 Screws on the Projection Unit.


Screw
Screw
Screw
Screw
Twist
Twist

<Front View>

Fig. M1-5

2) Adjust the Projection Lens by twisting so that the long line "g" and the long line "h" are within 4 dots. (The long line "g" and the long line "h" will be almost aligned horizontally.)


OPT HPOS 0024
"G"
"H"
long line "g"
long line "h"
within 4 dots
"G"
"H"

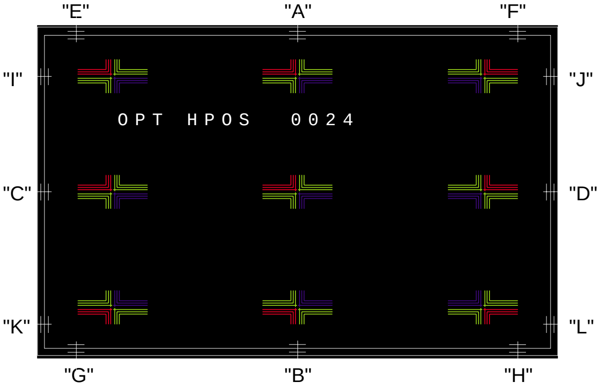
<MMD-CHK 2/8>

Note:
If the Projection Lens is twisted left, the Focus Screen twists left.
If the Projection Lens is twisted right, the Focus Screen twists right.

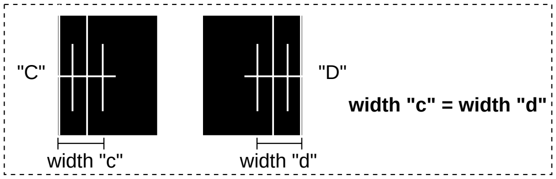
3) Tighten the 4 Screws while fixing the Projection Lens.

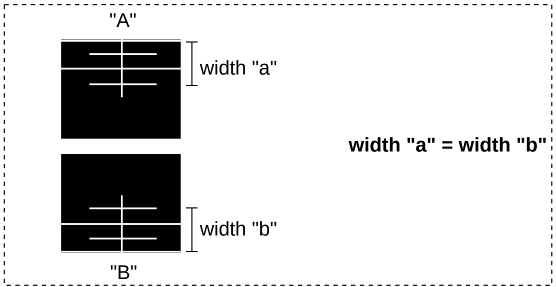
c. Electrical Picture Position Adjustment (H/V)

1) Adjust OPT HPOS so that "C" is symmetrical to "D." by pressing the VOLUME UP/DOWN key on the remote to change the value.
2) Press the CH UP/DOWN key on the remote to return to the OTHER menu.
3) Select OPT VPOS by pressing CH UP/DOWN key on the remote.
4) Adjust OPT VPOS so that "A" is symmetrical to "B" by pressing the VOLUME UP/DOWN key on the remote to change the value.


"E"
"A"
"F"
"I"
"J"
OPT HPOS 0024
"C"
"D"
"K"
"L"
"G"
"B"
"H"

<MMD-CHK 2/8>


"C"
"D"
width "c" = width "d"
width "c"
width "d"


"A"
width "a"
width "a" = width "b"
width "b"
"B"

5) Confirm that all "A", "B", "C", "D", "E", "F", "G", "H", "I", "J", "K", "L" are each almost symmetrical.
6) If not, adjust the "OPT HPOS" and "OPT VPOS" (repeat steps 1-6) until the picture is in the correct position.
7) After changing the value, the adjustment data will be written to the EEPROM.

9 Maintenance

9.1. Cleaning Methods

THE SCREEN UNIT AND THE MIRROR

- THE SCREEN UNIT (Lenticular Screen, Fresnel Lens)

It is strongly recommended that the Lenticular Screen surface (outside) and the Fresnel Lens surface (inside) should be wiped gently with a clean, soft, dry cloth to remove the dirt.

Note:

1. If the dirt cannot be removed by wiping with a clean, soft, dry cloth, use a clean, soft, dry cloth moistened with diluted neutral pH liquid cleanser or a lens cleaner (usually containing a small amount of ethyl alcohol) and wipe lightly. Take care not to leave any streaks.
   Do not use cleaning materials containing methyl alcohol, acetone, or dichloromethane.
2. Use an air blower to clean the inner surface of the Lenticular Screen and the outer surface of the Fresnel Lens (the surfaces that one another). These surfaces must not be wiped with a cloth.

- THE MIRROR

Remove any dirt with an air blower or wipe with a clean, soft, dry cloth. If wiped too forcefully, the surface of the Mirror can be damaged. If wiping with a clean, dry cloth does not remove the dirt, the Mirror must be replaced.

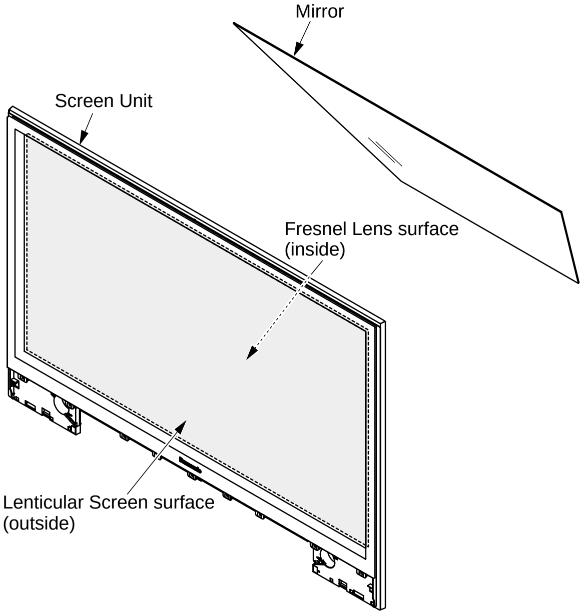


Fig. 6-1

THE PROJECTION LENS

Use lens cleaning paper and cleaner available at your local camera shop, etc. Dampen the cleaning paper with cleaner and gently wipe the surface of the lens from the center outward to remove dust.

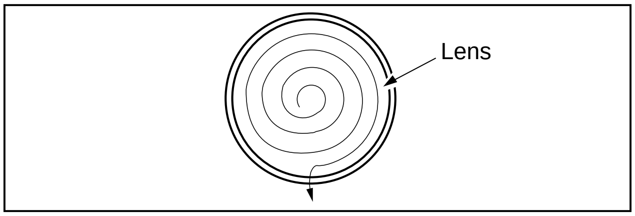


Fig. 6-2

THE FILTER ON THE OPT/TV UNIT

CAUTION:

Operating with torn or damaged Air Filter may cause damage to the OPT/TV Unit.

Remove the OPT/TV Unit from rear. Then, clean the air filters. Gently remove any accumulated dust from filter with a vacuum cleaner; use extreme care so as not to damage or tear the filters.

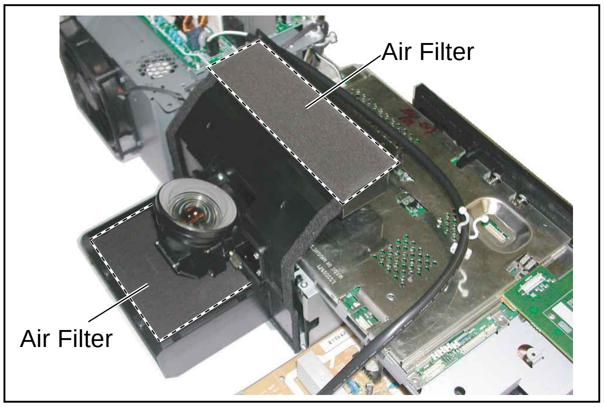


Fig. 6-3

10 Voltage Chart and Waveform of Connectors

MAIN P.C.B.

MODE PIN NO.	POWER ON	WF NO.
CN1101		
1	20.9	---
2	20.9	---
3	0	---
4	0	---
5	7.1	---
6	3.3	---
7	31.5	---
8	3.1	---
9	9.1	---
10	9.1	---
11	9.1	---
12	0	---
13	0	---
14	0	---
CN1102		
1	3.1	---
2	3.1	---
CN3001		
1	0	WF1
2	5.1	---
3	0	WF2
4	0	WF3
5	0	---
6	0	WF1
7	0	---
8	0	WF1
9	0	---
10	0	WF4
11	0	WF5
12	0	WF6
13	0	---
14	0	WF4
15	0	WF5
16	0	WF6
17	0	---
18	4.2	WF7
19	4.6	---
20	4.6	---
21	2.2	---
22	2.2	---
23	4.5	---
24	4.5	---
25	0	---
26	0	---
27	0	---
28	1.3	---
29	2.9	---
30	3.4	---
31	1.3	---
32	5.0	---
33	5.0	---
34	9.0	---
35	0	---
CN4501		
1	3.4	---
2	0	---
3	10.5	---
4	10.5	---
5	10.5	---
6	10.5	---
CN5503		
1	3.4	---
2	0	---
3	3.4	---
4	3.4	---
5	0	---
6	3.4	---
7	3.4	---
8	0	---
9	3.4	---
10	3.4	---
11	0	---
12	3.4	---
13	0	---
14	0	---
15	3.3	---
16	3.3	---
17	5.2	---
18	0	---
19	0	---
20	3.4	---
21	0	---
22	3.4	---
23	---	---
24	0	---
25	3.3	---
26	0	---
27	3.3	---
28	3.3	---
29	---	---
30	---	---
CN6003		
1	4.7	---
2	3.4	---
3	0	---
4	3.4	---
5	---	---
6	0	---
7	0	---
8	0	---
CN6005		
1	0	WF8
2	5.1	---
3	5.2	---
4	---	---
5	---	---
6	0	---
7	0.1	WF9
CN8201		
1	3.3	---
2	0	---
3	0	---
4	0	---
5	3.3	---
6	0	---
7	3.3	---
8	3.3	---
9	3.3	---
10	3.3	---
11	3.3	---
12	3.3	---
CN8801		
1	2.3	---
2	4.2	---
3	0	---
4	31.6	---
5	2.3	---
6	5.1	---
7	0	---
8	5.1	---
9	0	---
10	1.8	---
11	0	---
12	2.9	---
13	0	---
14	0	---
15	0	---
16	0	---
17	5.1	---
18	0	---
19	5.1	---
20	3.3	---

POWER P.C.B.

MODE PIN NO.	POWER ON	WF NO.
CN1003		
1	20.9	---
2	20.9	---
3	0	---
4	0	---
5	7.1	---
6	3.3	---
7	31.5	---
8	3.1	---
9	9.1	---
10	9.1	---
11	9.1	---
12	0	---
13	0	---
14	0	---

SD/HDMI P.C.B.

MODE PIN NO.	POWER ON	WF NO.
CN9802		
1	3.3	---
2	0	---
3	0	---
4	0	---
5	3.3	---
6	0	---
7	3.3	---
8	3.3	---
9	3.3	---
10	3.3	---
11	3.3	---
12	3.3	---
CN9804		
1	3.4	---
2	0	---
3	3.4	---
4	3.4	---
5	0	---
6	3.4	---
7	3.4	---
8	0	---
9	3.4	---
10	3.4	---
11	0	---
12	3.4	---
13	0	---
14	0	---
15	3.3	---
16	3.3	---
17	5.2	---
18	0	---
19	0	---
20	3.4	---
21	0	---
22	3.4	---
23	---	---
24	0	---
25	3.3	---
26	0	---
27	3.3	---
28	3.3	---
29	---	---
30	---	---

REAR JACK P.C.B.

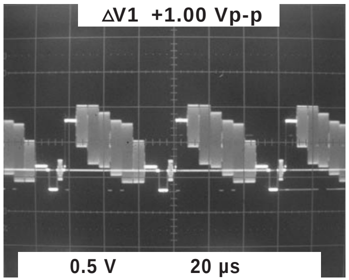
MODE PIN NO.	POWER ON	WF NO.
CN2751		
1	7.0	---
2	0	---
3	0	---
CN2752		
1	7.0	---
2	0	---
3	0	---
CN2753		
1	7.1	---
2	0	---
3	0.1	---
CN2754		
1	6.1	---
2	0	---
3	0.1	---
1	0	WF1
2	5.1	---
3	0	WF2
4	0	WF3
5	0	---
6	0	WF1
7	0	---
8	0	WF1
9	0	---
10	0	WF4
11	0	WF5
12	0	WF6
13	0	---
14	0	WF4
15	0	WF5
16	0	WF6
17	0	---
18	4.2	WF7
19	4.6	---
20	4.6	---
21	2.2	---
22	2.2	---
23	4.5	---
24	4.5	---
25	0	---
26	0	---
27	0	---
28	1.3	---
29	2.9	---
30	3.4	---
31	1.3	---
32	5.0	---
33	5.0	---
34	9.0	---
35	0	---

TUNER P.C.B.

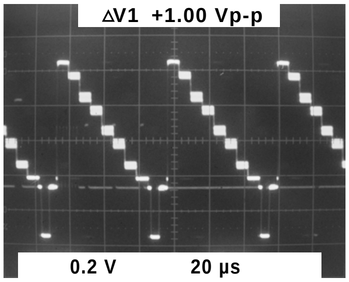
MODE PIN NO.	POWER ON	WF NO.
CN8801		
1	2.3	---
2	4.2	---
3	0	---
4	31.6	---
5	2.3	---
6	5.1	---
7	0	---
8	5.1	---
9	0	---
10	1.8	---
11	0	---
12	2.9	---
13	0	---
14	0	---
15	0	---
16	0	---
17	5.1	---
18	0	---
19	5.1	---
20	3.3	---

RF AMP POWER SUPPLY P.C.B.

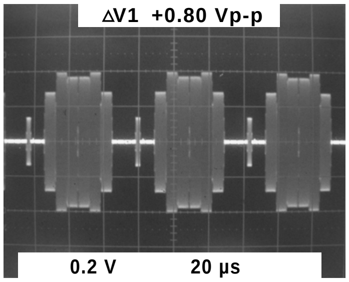
MODE PIN NO.	POWER ON	WF NO.
CN1		
1-2	AC120	---
CN151		
1	26.0	---
2	26.0	---
3	26.0	---
4	0	---
5	0	---
6	0	---



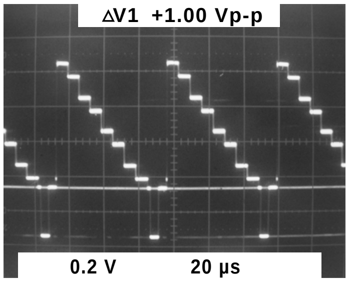
WF1



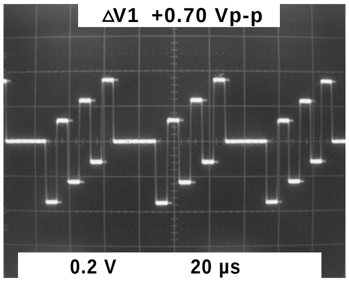
WF2



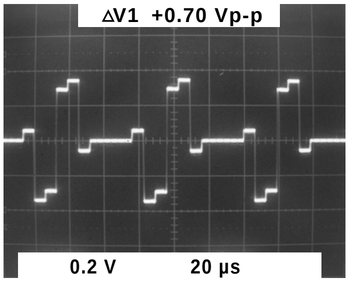
WF3



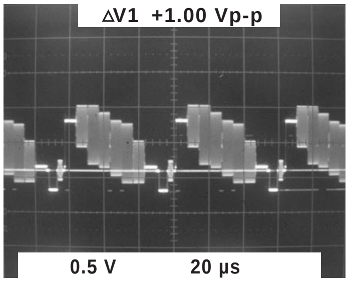
WF4



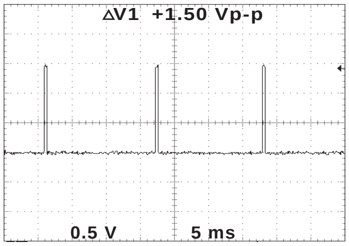
WF5



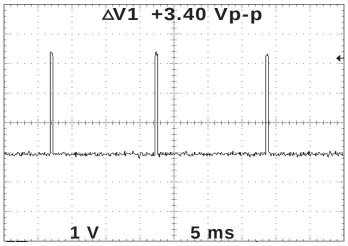
WF6



WF7



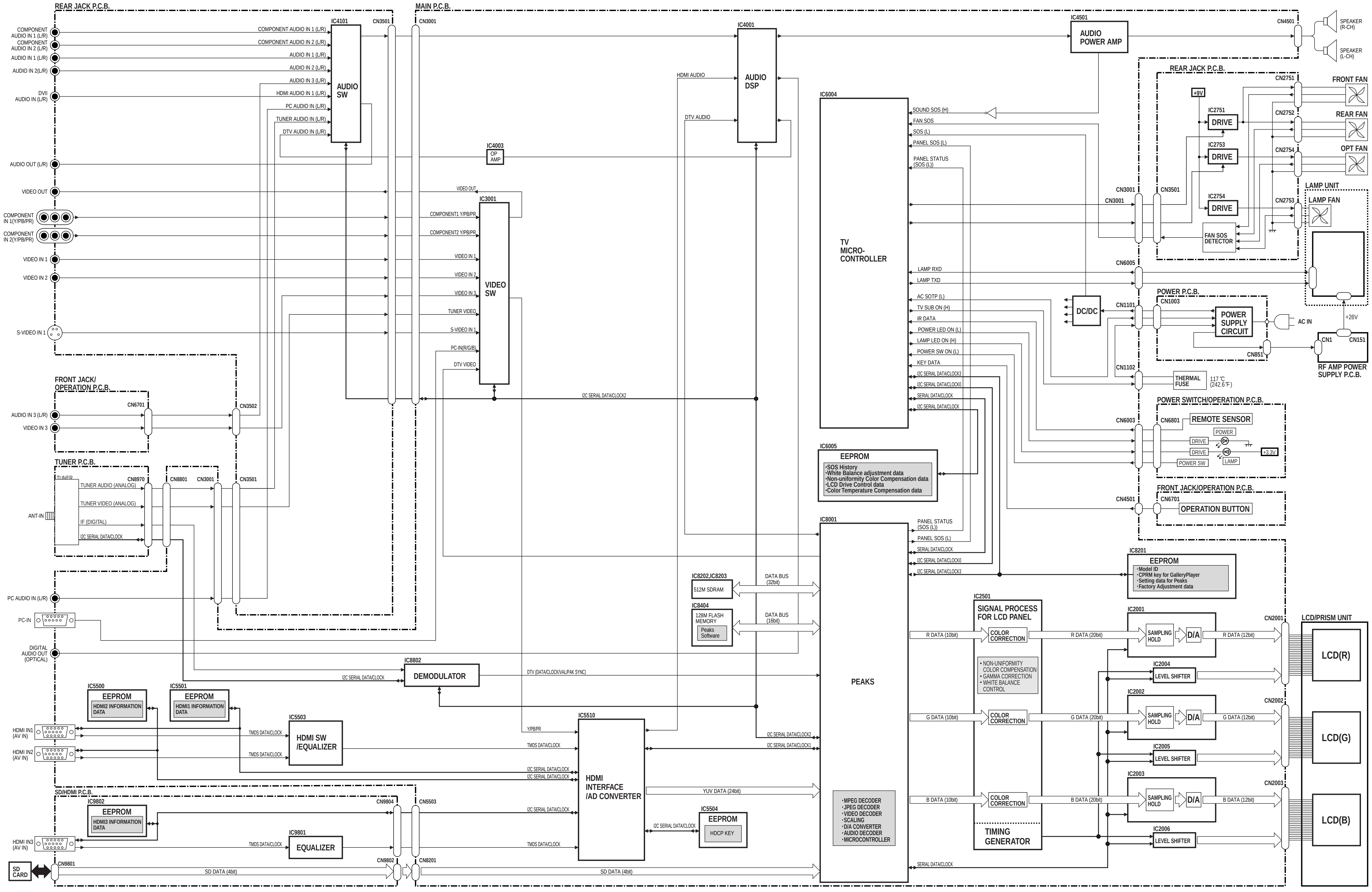
WF8



WF9

11 Block Diagrams

OVERALL BLOCK DIAGRAM


REAR JACK P.C.B.
MAIN P.C.B.
COMPONENT AUDIO IN 1 (L/R)
COMPONENT AUDIO IN 2 (L/R)
AUDIO IN 1 (L/R)
AUDIO IN 2(L/R)
DVII AUDIO IN (L/R)
AUDIO OUT (L/R)
VIDEO OUT
COMPONENT IN 1(Y/PB/PR)
COMPONENT IN 2(Y/PB/PR)
VIDEO IN 1
VIDEO IN 2
S-VIDEO IN 1
IC4101
CN3501
CN3001
AUDIO SW
AUDIO IN 3 (L/R)
HDMI AUDIO IN 1 (L/R)
PC AUDIO IN (L/R)
TUNER AUDIO IN (L/R)
DTV AUDIO IN (L/R)
IC4003
OP AMP
IC4001
AUDIO DSP
HDMI AUDIO
DTV AUDIO
IC4501
AUDIO POWER AMP
CN4501
SPEAKER (R-CH)
SPEAKER (L-CH)
VIDEO OUT
IC3001
VIDEO SW
COMPONENT1 Y/PB/PR
COMPONENT2 Y/PB/PR
VIDEO IN 1
VIDEO IN 2
VIDEO IN 3
TUNER VIDEO
S-VIDEO IN 1
PC-IN(R/G/B)
DTV VIDEO
I2C SERIAL DATA/CLOCK2
IC6004
TV MICRO-CONTROLLER
SOUND SOS (H)
FAN SOS
SOS (L)
PANEL SOS (L)
PANEL STATUS (SOS (L))
LAMP RXD
LAMP TXD
AC SOTP (L)
TV SUB ON (H)
IR DATA
POWER LED ON (L)
LAMP LED ON (H)
POWER SW ON (L)
KEY DATA
I2C SERIAL DATA/CLOCK3
I2C SERIAL DATA/CLOCK0
SERIAL DATA/CLOCK
I2C SERIAL DATA/CLOCK
IC6005
EEPROM
•SOS History
•White Balance adjustment data
•Non-uniformity Color Compensation data
•LCD Drive Control data
•Color Temperature Compensation data
REAR JACK P.C.B.
CN2751
FRONT FAN
+9V
IC2751
DRIVE
CN2752
REAR FAN
IC2753
DRIVE
CN2754
OPT FAN
CN3001
CN3501
IC2754
DRIVE
CN2753
LAMP UNIT
LAMP FAN
FAN SOS DETECTOR
CN6005
POWER P.C.B.
CN1003
DC/DC
CN1101
POWER SUPPLY CIRCUIT
AC IN
+26V
CN1
CN151
CN851
RF AMP POWER SUPPLY P.C.B.
CN1102
THERMAL FUSE
117 ℃ (242.6°F)
POWER SWITCH/OPERATION P.C.B.
CN6003
CN6801
REMOTE SENSOR
POWER
DRIVE
DRIVE
POWER SW
LAMP
+3.3V
FRONT JACK/OPERATION P.C.B.
CN4501
CN6701
OPERATION BUTTON
FRONT JACK/ OPERATION P.C.B.
CN6701
CN3502
AUDIO IN 3 (L/R)
VIDEO IN 3
TUNER P.C.B.
TUNER
CN8970
CN8801
CN3001
CN3501
TUNER AUDIO (ANALOG)
TUNER VIDEO (ANALOG)
IF (DIGITAL)
I2C SERIAL DATA/CLOCK
ANT-IN
PC AUDIO IN (L/R)
PC-IN
DIGITAL AUDIO OUT (OPTICAL)
IC8802
DEMODULATOR
I2C SERIAL DATA/CLOCK
DTV (DATA/CLOCK/VAL/PAK SYNC)
IC5500
EEPROM
HDMI2 INFORMATION DATA
IC5501
EEPROM
HDMI1 INFORMATION DATA
IC5503
HDMI SW /EQUALIZER
HDMI IN1 (AV IN)
HDMI IN2 (AV IN)
TMDS DATA/CLOCK
TMDS DATA/CLOCK
TMDS DATA/CLOCK
Y/PB/PR
IC5510
HDMI INTERFACE /AD CONVERTER
I2C SERIAL DATA/CLOCK
I2C SERIAL DATA/CLOCK
I2C SERIAL DATA/CLOCK2
I2C SERIAL DATA/CLOCK1
YUV DATA (24bit)
IC5504
EEPROM
HDCP KEY
I2C SERIAL DATA/CLOCK
SD/HDMI P.C.B.
IC9802
EEPROM
HDMI3 INFORMATION DATA
CN9804
CN5503
IC9801
EQUALIZER
HDMI IN3 (AV IN)
TMDS DATA/CLOCK
TMDS DATA/CLOCK
SD CARD
CN9801
CN9802
CN8201
SD DATA (4bit)
SD DATA (4bit)
IC8001
PEAKS
PANEL STATUS (SOS (L))
PANEL SOS (L)
SERIAL DATA/CLOCK
I2C SERIAL DATA/CLOCK0
I2C SERIAL DATA/CLOCK3
IC8202,IC8203
512M SDRAM
DATA BUS (32bit)
IC8404
128M FLASH MEMORY
Peaks Software
DATA BUS (16bit)
•MPEG DECODER
•JPEG DECODER
•VIDEO DECODER
•SCALING
•D/A CONVERTER
•AUDIO DECODER
•MICROCONTROLLER
SERIAL DATA/CLOCK
IC8201
EEPROM
•Model ID
•CPRM key for GalleryPlayer
•Setting data for Peaks
•Factory Adjustment data
IC2501
SIGNAL PROCESS FOR LCD PANEL
COLOR CORRECTION
• NON-UNIFORMITY COLOR COMPENSATION
• GAMMA CORRECTION
• WHITE BALANCE CONTROL
COLOR CORRECTION
COLOR CORRECTION
TIMING GENERATOR
R DATA (10bit)
G DATA (10bit)
B DATA (10bit)
R DATA (20bit)
G DATA (20bit)
B DATA (20bit)
IC2001
SAMPLING HOLD
D/A
R DATA (12bit)
IC2004
LEVEL SHIFTER
IC2002
SAMPLING HOLD
D/A
G DATA (12bit)
IC2005
LEVEL SHIFTER
IC2003
SAMPLING HOLD
D/A
B DATA (12bit)
IC2006
LEVEL SHIFTER
CN2001
CN2002
CN2003
LCD/PRISM UNIT
LCD(R)
LCD(G)
LCD(B)

OVERALL BLOCK DIAGRAM
PT-56LCX70/PT-61LCX70/PT-50LCX7/PT-56LCX7
/PT-61LCX7/PT-50LCX7K/PT-56LCX70-K/PT-61LCX70-K

12 Schematic Diagrams

12.1. SCHEMATIC DIAGRAM & CIRCUIT BOARD LAYOUT NOTES

1. **Important safety notice**
   Components identified by the sign ⚠ have special characteristics important for safety. When replacing any of these components. Use only the specified parts.

2. Do not use the part number shown on this drawing for ordering.
   The correct part number and part value is shown in the parts list, and may be slightly different or amended since this drawing was prepared.

3. Use only original replacement parts:
   To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.

4. Parts different in shape or size may be used.
   However, only interchangeable parts will be supplied as service replacement parts.

5. Test point information
   ● : Test point with a jumper wire across a hole in P.C.B.
   ○ : Test point with no test pin.

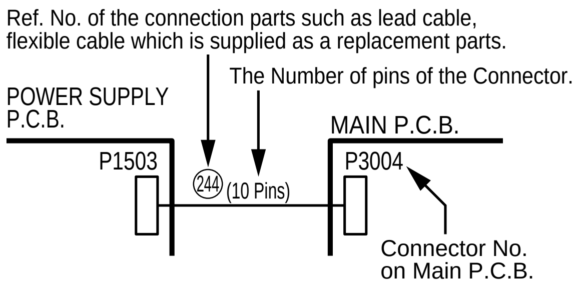
Schematic Diagram Notes

1. Indication for Zener Voltage of Zener Diodes
   The Zener Voltage of Zener Diodes are indicated as such on Schematic Diagrams.

   Example:
   (6.2V)......Zener Voltage

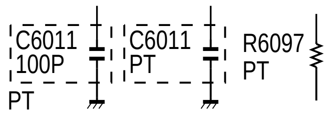
2. How to identify Connectors
   Each connector is labeled with a Connector No. and Pin No. Indicating what it is connected to,
   in other words, its counter part.
   Use the interconnection schematic diagram to find the connection between associated connectors.

   Example:
   The connections between P.C.B.s are shown below.


Ref. No. of the connection parts such as lead cable,
flexible cable which is supplied as a replacement parts.
The Number of pins of the Connector.
POWER SUPPLY
P.C.B.
MAIN P.C.B.
P1503
244
(10 Pins)
P3004
Connector No.
on Main P.C.B.

3. Parts marked "PT" are not used in any models included in this service model.

Example:


C6011
100P
PT
C6011
PT
R6097
PT

4. Jumper wires are used for WA10, WA5 etc and these are not supplied as replacement parts.

Circuit Board Layout Note

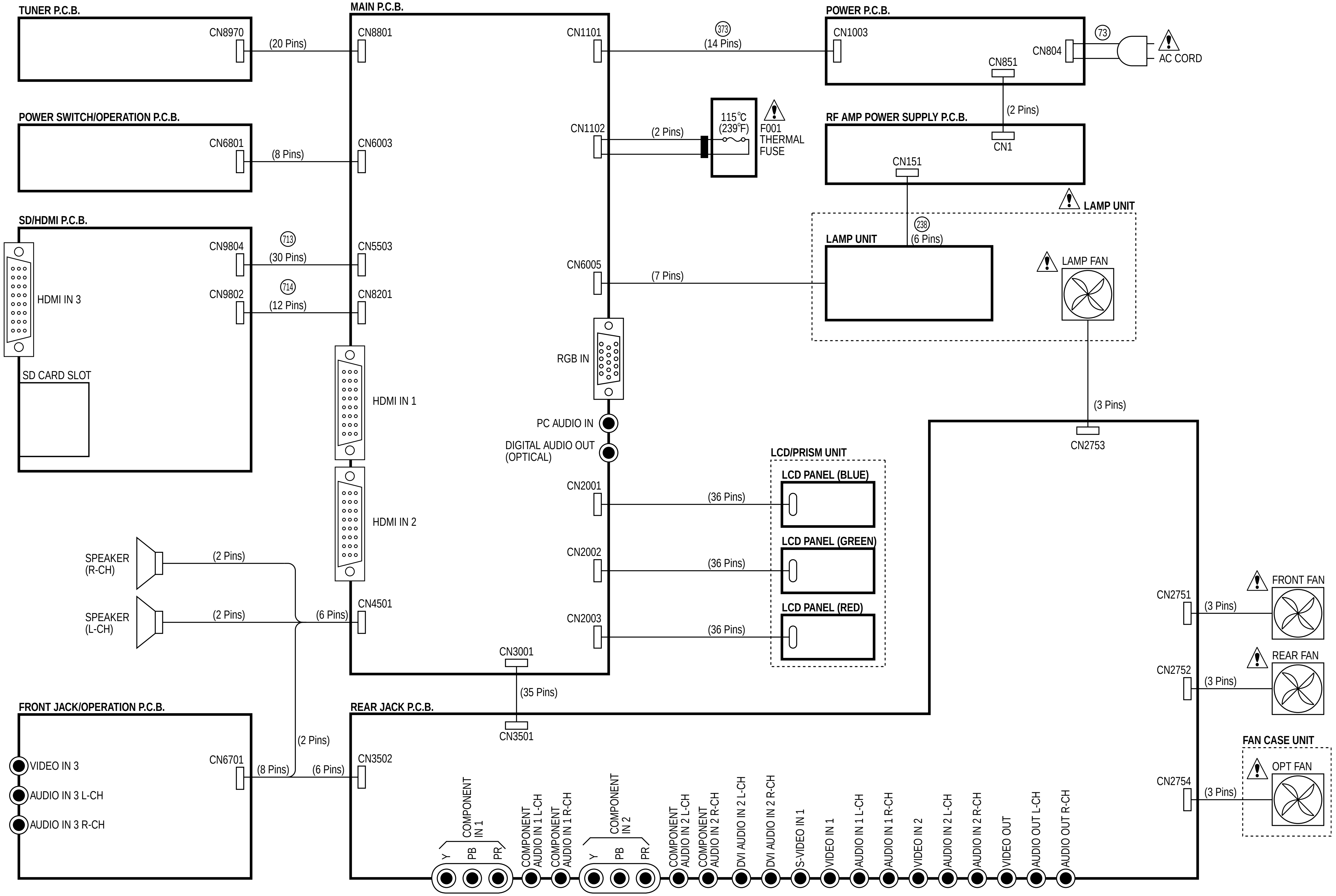
Circuit Board Layout shows components installed for various models.
For proper parts content for the model you are servicing, please refer to the schematic diagram and parts list.

NOTE:
Circuit Board Layout includes components which are not used.

12.2. INTERCONNECTION SCHEMATIC DIAGRAM

INTERCONNECTION SCHEMATIC DIAGRAM

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.



TUNER P.C.B.
CN8970
(20 Pins)
MAIN P.C.B.
CN8801
CN1101
373
(14 Pins)
POWER P.C.B.
CN1003
CN804
73
⚠ AC CORD
CN851
(2 Pins)
POWER SWITCH/OPERATION P.C.B.
CN6801
(8 Pins)
CN6003
CN1102
(2 Pins)
115°C
(239°F)
⚠ F001
THERMAL
FUSE
RF AMP POWER SUPPLY P.C.B.
CN1
CN151
SD/HDMI P.C.B.
CN9804
713
(30 Pins)
CN5503
CN9802
714
(12 Pins)
CN8201
HDMI IN 3
SD CARD SLOT
⚠ LAMP UNIT
LAMP UNIT
238
(6 Pins)
CN6005
(7 Pins)
⚠ LAMP FAN
RGB IN
HDMI IN 1
PC AUDIO IN
DIGITAL AUDIO OUT
(OPTICAL)
(3 Pins)
CN2753
LCD/PRISM UNIT
LCD PANEL (BLUE)
CN2001
(36 Pins)
HDMI IN 2
LCD PANEL (GREEN)
CN2002
(36 Pins)
LCD PANEL (RED)
CN2003
(36 Pins)
SPEAKER
(R-CH)
(2 Pins)
SPEAKER
(L-CH)
(2 Pins)
(6 Pins)
CN4501
⚠ FRONT FAN
CN2751
(3 Pins)
⚠ REAR FAN
CN2752
(3 Pins)
CN3001
(35 Pins)
CN3501
FRONT JACK/OPERATION P.C.B.
REAR JACK P.C.B.
FAN CASE UNIT
⚠ OPT FAN
CN2754
(3 Pins)
(2 Pins)
CN6701
(8 Pins)
(6 Pins)
CN3502
VIDEO IN 3
AUDIO IN 3 L-CH
AUDIO IN 3 R-CH
COMPONENT IN 1
Y
PB
PR
COMPONENT AUDIO IN 1 L-CH
COMPONENT AUDIO IN 1 R-CH
COMPONENT IN 2
Y
PB
PR
COMPONENT AUDIO IN 2 L-CH
COMPONENT AUDIO IN 2 R-CH
DVI AUDIO IN 2 L-CH
DVI AUDIO IN 2 R-CH
S-VIDEO IN 1
VIDEO IN 1
AUDIO IN 1 L-CH
AUDIO IN 1 R-CH
VIDEO IN 2
AUDIO IN 2 L-CH
AUDIO IN 2 R-CH
VIDEO OUT
AUDIO OUT L-CH
AUDIO OUT R-CH

INTERCONNECTION SCHEMATIC DIAGRAM
PT-56LCX70/PT-61LCX70/PT-50LCX7/PT-56LCX7
/PT-61LCX7/PT-50LCX7K/PT-56LCX70-K/PT-61LCX70-K

12.3. POWER SCHEMATIC DIAGRAMS

POWER SCHEMATIC DIAGRAM

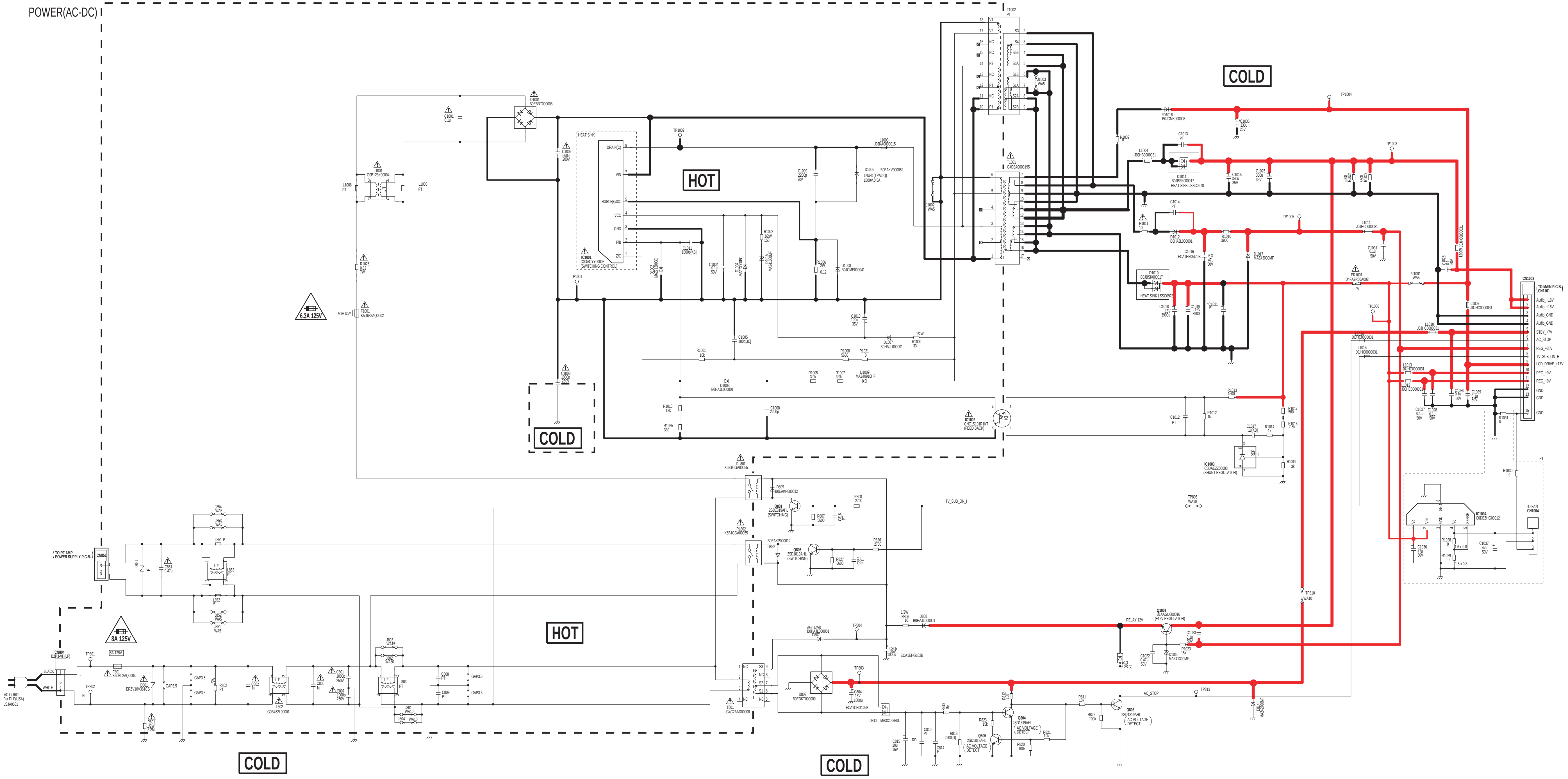
8A 125V

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE 8A 125V FUSE.
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES
D' INCENDIE N' UTILISERQUE DES FUSIBLE DE MÉME
TYPE 8A 125V

6.3A 125V

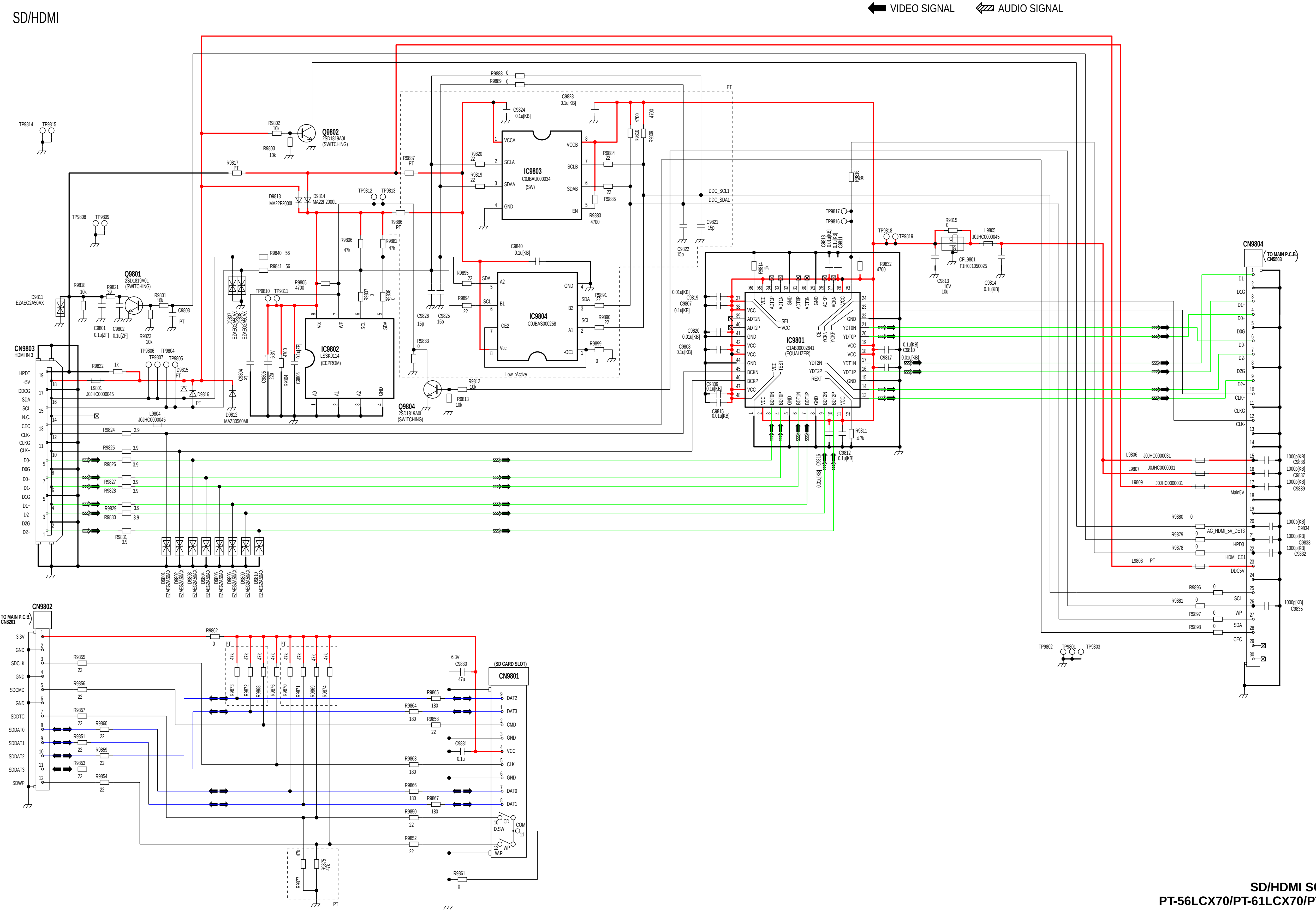
CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE 6.3A 125V FUSE.
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES
D' INCENDIE N' UTILISERQUE DES FUSIBLE DE MÉME
TYPE 6.3A 125V

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.


POWER(AC-DC)
HOT
COLD
HOT
COLD
COLD
COLD
6.3A 125V
8A 125V
T1002
T1001
IC1001
IC1002
IC1003
IC1004
CN1003
TO MAIN P.C.B. CN1101
CN851
TO RF AMP POWER SUPPLY P.C.B.
CN804
AC CORD
TV_SUB_ON_H
AC_STOP
RELAY 12V
HEAT SINK
TO FAN CN1004

12.4. SD/HDMI SCHEMATIC DIAGRAM

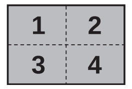
SD/HDMI SCHEMATIC DIAGRAM

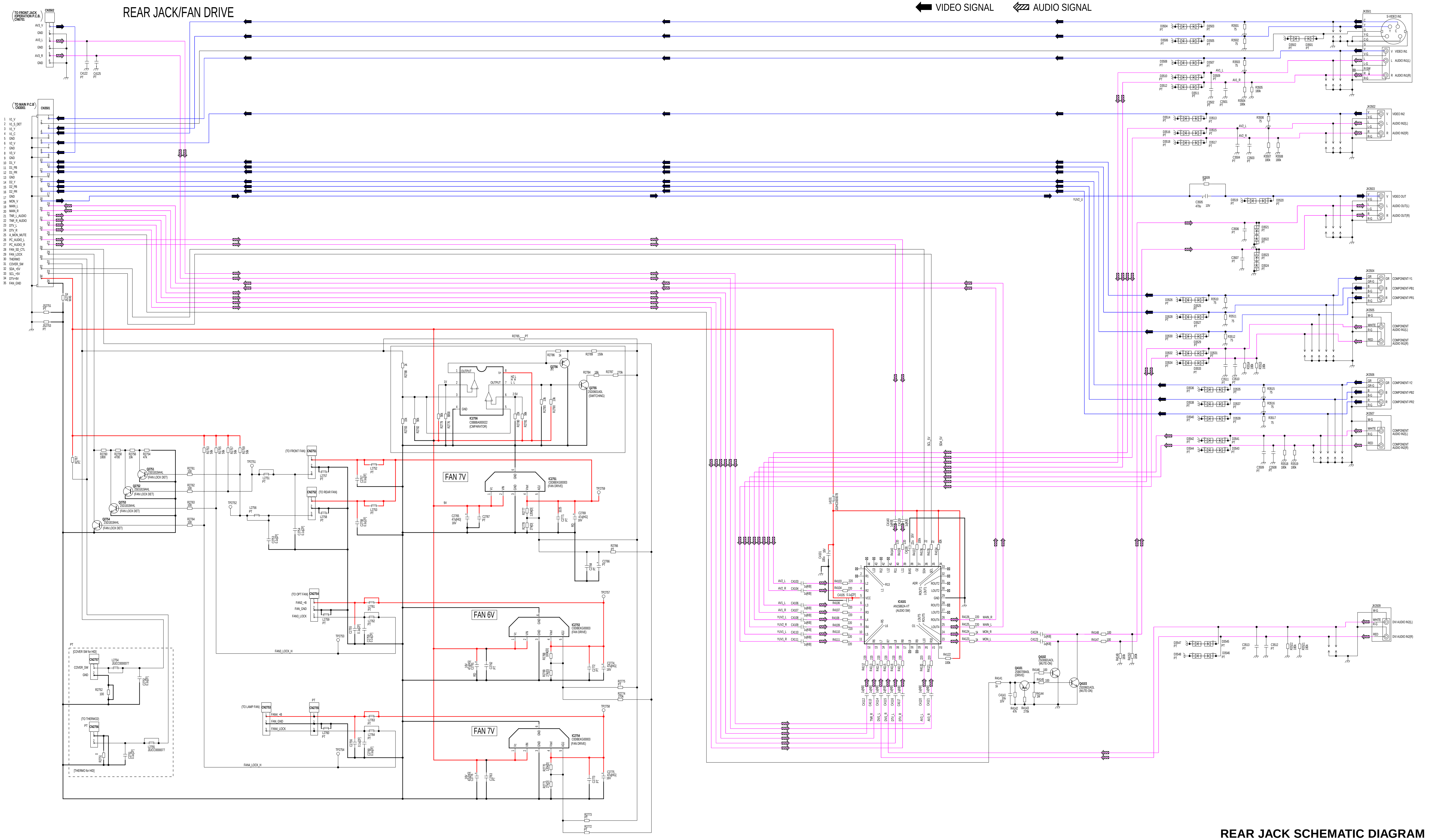

SD/HDMI
VIDEO SIGNAL
AUDIO SIGNAL
Q9802 2SD1819A0L (SWITCHING)
Q9801 2SD1819A0L (SWITCHING)
Q9804 2SD1819A0L (SWITCHING)
IC9803 C0JBAU000034 (SW)
VCCA
SCLA
SDAA
GND
VCCB
SCLB
SDAB
EN
IC9804 C0JBAS000258
IC9802 LSSK0114 (EEPROM)
IC9801 C1AB00002641 (EQUALIZER)
CN9803 HDMI IN 3
HPDT
+5V
DDCG
SDA
SCL
N.C.
CEC
CLK-
CLKG
CLK+
D0-
D0G
D0+
D1-
D1G
D1+
D2-
D2G
D2+
CN9804 (TO MAIN P.C.B) CN5503
Main5V
AG_HDMI_5V_DET3
HPD3
HDMI_CE1
DDC5V
SCL
WP
SDA
CEC
DDC_SCL1
DDC_SDA1
CN9802 (TO MAIN P.C.B) CN8201
3.3V
GND
SDCLK
SDCMD
SDDTC
SDDAT0
SDDAT1
SDDAT2
SDDAT3
SDWP
[SD CARD SLOT]
CN9801
DAT2
DAT3
CMD
VCC
CLK
DAT0
DAT1
CD
D.SW
COM
WP
W.P.
Low_Active
PT

SD/HDMI SCHEMATIC DIAGRAM
PT-56LCX70/PT-61LCX70/PT-50LCX7/PT-56LCX7
/PT-61LCX7/PT-50LCX7K/PT-56LCX70-K/PT-61LCX70-K

12.5. REAR JACK SCHEMATIC DIAGRAM

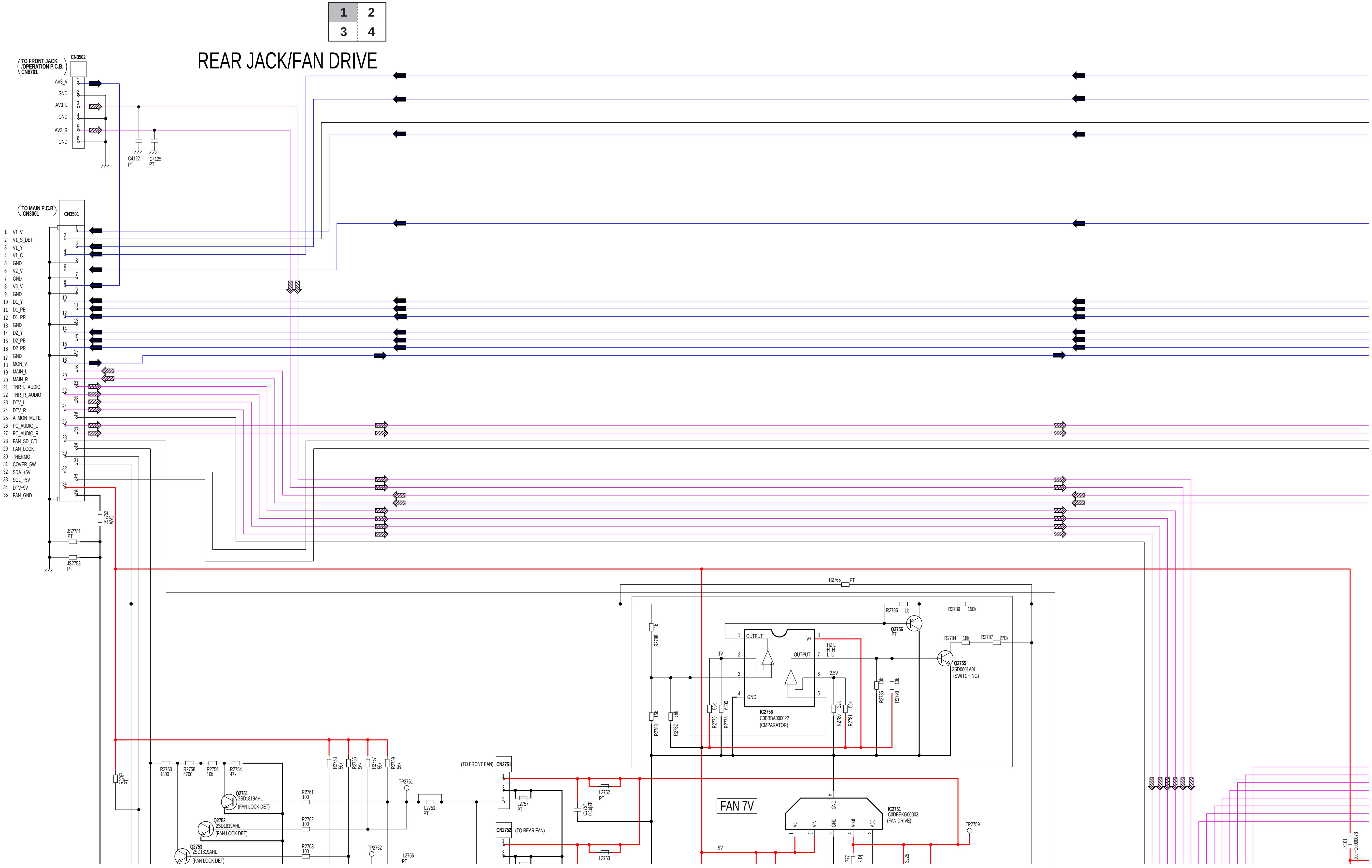
REAR JACK SCHEMATIC DIAGRAM




REAR JACK/FAN DRIVE
VIDEO SIGNAL
AUDIO SIGNAL
TO FRONT JACK /OPERATION P.C.B. CN6701
CN3502
AV3_V
GND
AV3_L
GND
AV3_R
GND
C4122 PT
C4125 PT
TO MAIN P.C.B CN3001
CN3501
1 V1_V
2 V1_S_DET
3 V1_Y
4 V1_C
5 GND
6 V2_V
7 GND
8 V3_V
9 GND
10 D1_Y
11 D1_PB
12 D1_PR
13 GND
14 D2_Y
15 D2_PB
16 D2_PR
17 GND
18 MON_V
19 MAIN_L
20 MAIN_R
21 TNR_L_AUDIO
22 TNR_R_AUDIO
23 DTV_L
24 DTV_R
25 A_MON_MUTE
26 PC_AUDIO_L
27 PC_AUDIO_R
28 FAN_SD_CTL
29 FAN_LOCK
30 THERMO
31 COVER_SW
32 SDA_+5V
33 SCL_+5V
34 DTV+9V
35 FAN_GND
JS2752 WA5
JS2751 PT
JS2753 PT
JK3501
S-VIDEO IN1
VIDEO IN1
AUDIO IN1(L)
AUDIO IN1(R)
JK3502
VIDEO IN2
AUDIO IN2(L)
AUDIO IN2(R)
JK3503
VIDEO OUT
AUDIO OUT(L)
AUDIO OUT(R)
JK3504
COMPONENT-Y1
COMPONENT-PB1
COMPONENT-PR1
JK3505
COMPONENT AUDIO IN1(L)
COMPONENT AUDIO IN1(R)
JK3506
COMPONENT-Y2
COMPONENT-PB2
COMPONENT-PR2
JK3507
COMPONENT AUDIO IN2(L)
COMPONENT AUDIO IN2(R)
JK3508
DVI AUDIO IN(L)
DVI AUDIO IN(R)
IC2756
C0BBBA000022
(CMPARATOR)
Q2756 PT
Q2755
2SD0601A0L
(SWITCHING)
R2765 PT
R2786 1k
R2789 150k
R2784 18k
R2787 270k
FAN 7V
IC2751
C0DBEKG00003
(FAN DRIVE)
TP2759
9V
C2765 47u[HG] 16V
C2767 PT
C2769 47u[HG] 16V
R2777 120k[D]
R2778 27k[D]
R2766 PT
Q2751 2SD1819AHL (FAN LOCK DET)
Q2752 2SD1819AHL (FAN LOCK DET)
Q2753 2SD1819AHL (FAN LOCK DET)
Q2754 2SD1819AHL (FAN LOCK DET)
(TO FRONT FAN) CN2751
CN2752 (TO REAR FAN)
TP2751
TP2752
(TO OPT FAN) CN2754
FAN3_+B
FAN_GND
FAN3_LOCK
TP2753
FAN3_LOCK_H
FAN 6V
IC2753
C0DBEKG00003
(FAN DRIVE)
TP2757
[COVER SW for HID]
CN2757
COVER_SW
GND
L2754 J0JCC0000077
R2752 100
(TO THERMO2)
CN2756
L2755 J0JCC0000077
[THERMO for HID]
(TO LAMP FAN) CN2753
CN2755
FAN4_+B
FAN_GND
FAN4_LOCK
TP2754
FAN4_LOCK_H
FAN 7V
IC2754
C0DBEKG00003
(FAN DRIVE)
TP2758
IC4101
AN15862A-VT
(AUDIO SW)
AV2_L
AV2_R
AV1_L
AV1_R
YUV2_L
YUV2_R
YUV1_L
YUV1_R
MAIN_R
MAIN_L
MON_R
MON_L
TNR_R
DVI1_L
DVI1_R
DTV_L
DTV_R
AV3_L
AV3_R
Q4101
2SB0709A0L
(DRIVE)
Q4102
2SD0601A0L
(MUTE-ON)
Q4103
2SD0601A0L
(MUTE-ON)
SCL_5V
SDA_5V
YUV2_U

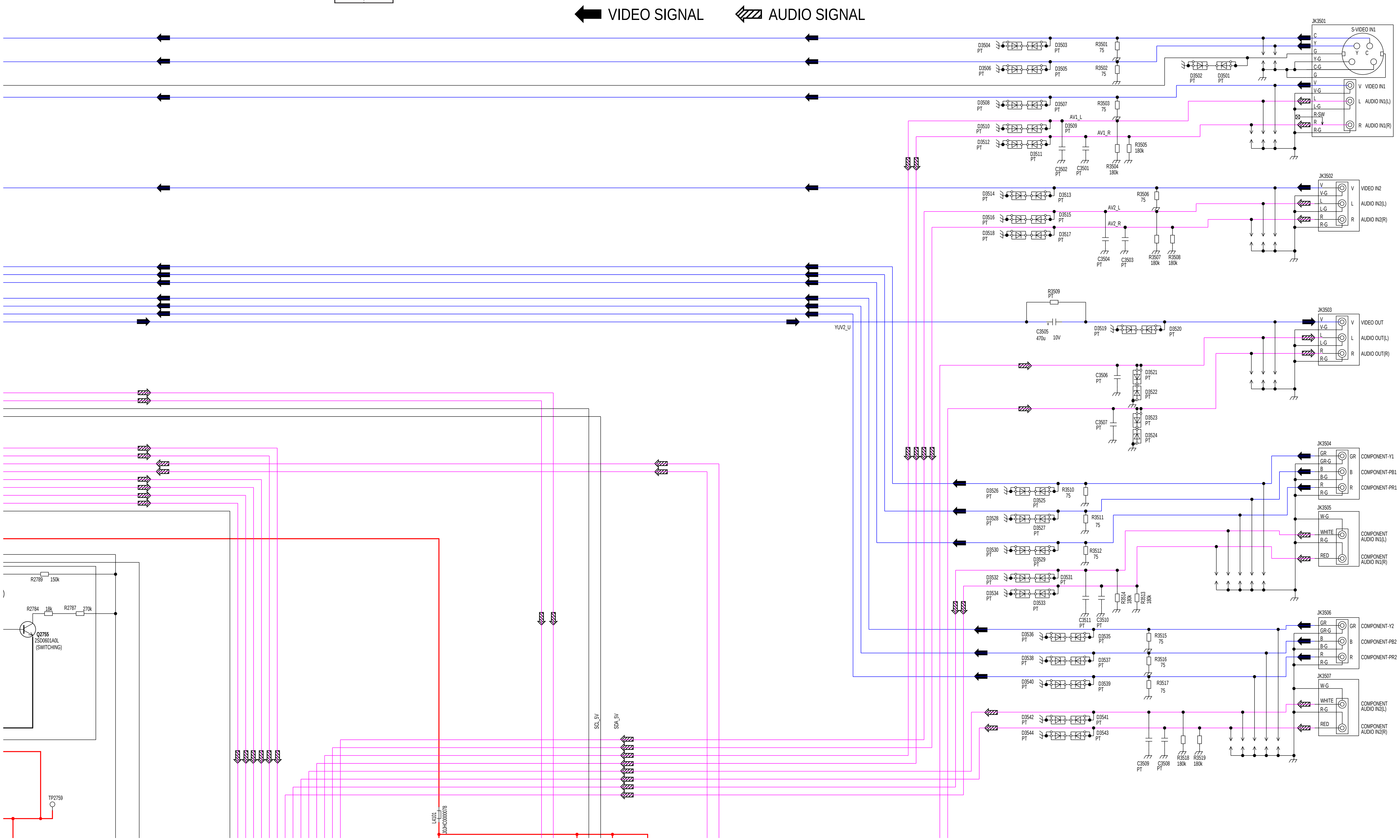
REAR JACK SCHEMATIC DIAGRAM
PT-56LCX70/PT-61LCX70/PT-50LCX7/PT-56LCX7
/PT-61LCX7/PT-50LCX7K/PT-56LCX70-K/PT-61LCX70-K

REAR JACK SCHEMATIC DIAGRAM


1 2
3 4
REAR JACK/FAN DRIVE
TO FRONT JACK /OPERATION P.C.B. CN6701
CN3502
AV3_V
GND
AV3_L
GND
AV3_R
GND
C4122 PT
C4125 PT
TO MAIN P.C.B CN3001
CN3501
1 V1_V
2 V1_S_DET
3 V1_Y
4 V1_C
5 GND
6 V2_V
7 GND
8 V3_V
9 GND
10 D1_Y
11 D1_PB
12 D1_PR
13 GND
14 D2_Y
15 D2_PB
16 D2_PR
17 GND
18 MON_V
19 MAIN_L
20 MAIN_R
21 TNR_L_AUDIO
22 TNR_R_AUDIO
23 DTV_L
24 DTV_R
25 A_MON_MUTE
26 PC_AUDIO_L
27 PC_AUDIO_R
28 FAN_SD_CTL
29 FAN_LOCK
30 THERMO
31 COVER_SW
32 SDA_+5V
33 SCL_+5V
34 DTV+9V
35 FAN_GND
JS2752 WA5
JS2751 PT
JS2753 PT
R2765 PT
R2786 1k
R2789 150k
R2788 1k
Q2756 PT
R2784 18k
R2787 270k
Q2755 2SD0601A0L (SWITCHING)
1 OUTPUT
V+ 8
1V 2
OUTPUT 7
HZ L H H L L
3
6 2.5V
4 GND
5
IC2756 C0BBBA000022 (CMPARATOR)
R2783 15k
R2782 56k
R2779 56k
R2776 6800
R2780 22k
R2781 56k
R2785 10k
R2790 10k
R2767 PT
R2760 1800
R2758 4700
R2756 10k
R2754 47k
R2753 56k
R2755 56k
R2757 56k
R2759 56k
Q2751 2SD1819AHL (FAN LOCK DET)
Q2752 2SD1819AHL (FAN LOCK DET)
Q2753 2SD1819AHL (FAN LOCK DET)
R2761 100
R2762 100
R2763 100
TP2751
TP2752
L2751 PT
L2756 PT
(TO FRONT FAN) CN2751
CN2752 (TO REAR FAN)
L2757 PT
C2757 0.1u[ZF]
L2752 PT
L2753
FAN 7V
9V
1 Vc
2 VIN
3 GND
4 Vout
5 ADJ
6 GND
IC2751 C0DBEKG00003 (FAN DRIVE)
TP2759
3225
L4101 J0JHC0000078

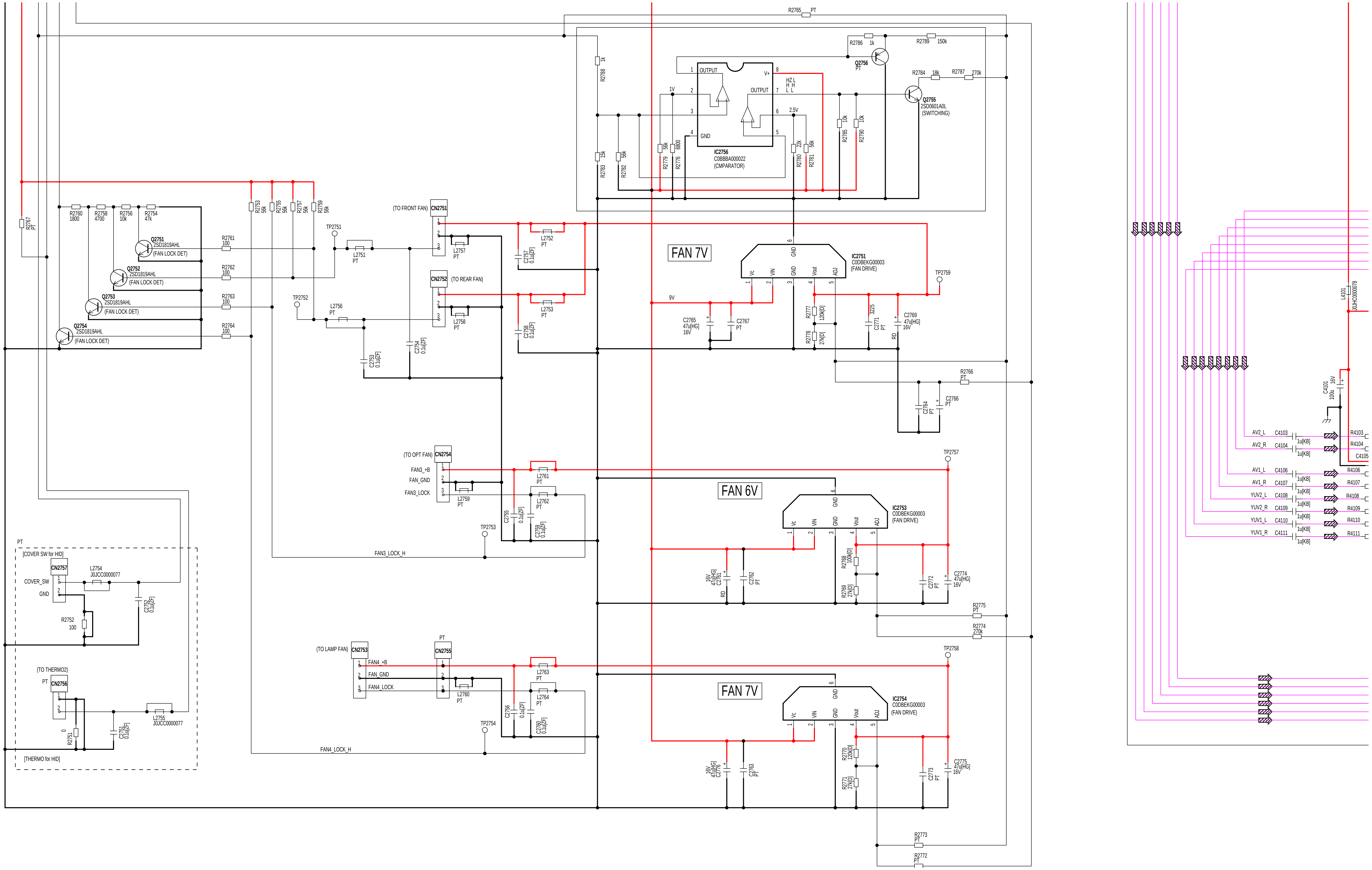
REAR JACK SCHEMATIC DIAGRAM

1	2
3	4


VIDEO SIGNAL
AUDIO SIGNAL
JK3501
S-VIDEO IN1
VIDEO IN1
AUDIO IN1(L)
AUDIO IN1(R)
JK3502
VIDEO IN2
AUDIO IN2(L)
AUDIO IN2(R)
JK3503
VIDEO OUT
AUDIO OUT(L)
AUDIO OUT(R)
JK3504
COMPONENT-Y1
COMPONENT-PB1
COMPONENT-PR1
JK3505
WHITE
RED
COMPONENT AUDIO IN1(L)
COMPONENT AUDIO IN1(R)
JK3506
COMPONENT-Y2
COMPONENT-PB2
COMPONENT-PR2
JK3507
COMPONENT AUDIO IN2(L)
COMPONENT AUDIO IN2(R)
R3501 75
R3502 75
R3503 75
R3504 180k
R3505 180k
R3506 75
R3507 180k
R3508 180k
R3509 PT
R3510 75
R3511 75
R3512 75
R3513 180k
R3514 180k
R3515 75
R3516 75
R3517 75
R3518 180k
R3519 180k
C3501 PT
C3502 PT
C3503 PT
C3504 PT
C3505 470u 10V
C3506 PT
C3507 PT
C3508 PT
C3509 PT
C3510 PT
C3511 PT
AV1_L
AV1_R
AV2_L
AV2_R
YUV2_U
SCL_5V
SDA_5V
R2789 150k
R2784 18k
R2787 270k
Q2755 2SD0601A0L (SWITCHING)
TP2759
L4101 J0JHC0000078

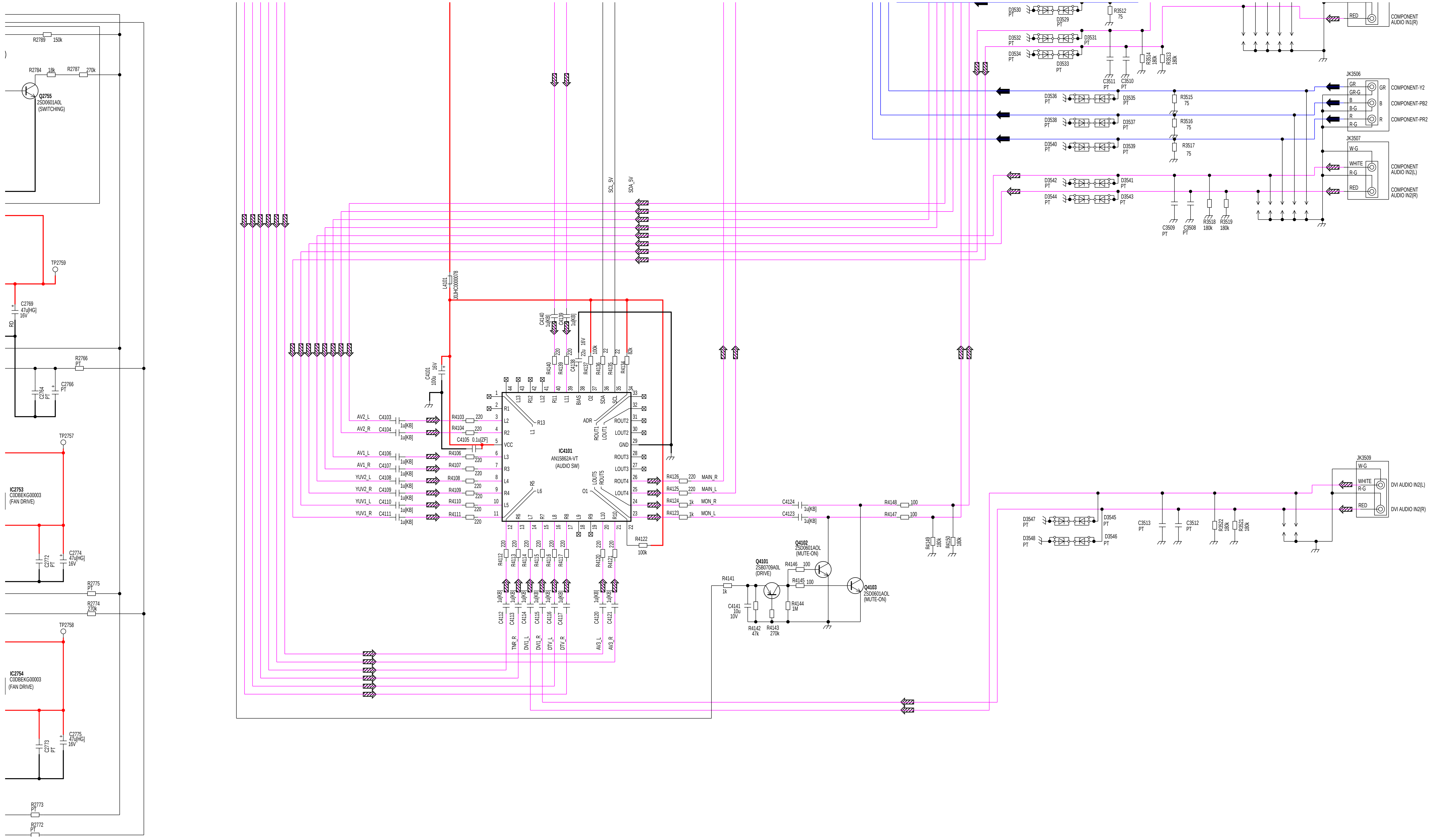
REAR JACK SCHEMATIC DIAGRAM

1	2
3	4


R2765 PT
R2786 1k
R2789 150k
Q2756 PT
R2784 18k
R2787 270k
Q2755 2SD0601A0L (SWITCHING)
R2788 1k
OUTPUT
V+
1V
HZ L
H H
L L
OUTPUT
2.5V
GND
IC2756 C0BBBA000022 (CMPARATOR)
R2783 15k
R2782 56k
R2779 56k
R2776 6800
R2780 22k
R2781 56k
R2785 10k
R2790 10k
R2767 PT
R2760 1800
R2758 4700
R2756 10k
R2754 47k
R2753 56k
R2755 56k
R2757 56k
R2759 56k
Q2751 2SD1819AHL (FAN LOCK DET)
Q2752 2SD1819AHL (FAN LOCK DET)
Q2753 2SD1819AHL (FAN LOCK DET)
Q2754 2SD1819AHL (FAN LOCK DET)
R2761 100
R2762 100
R2763 100
R2764 100
TP2751
L2751 PT
(TO FRONT FAN) CN2751
L2757 PT
C2757 0.1u[ZF]
L2752 PT
CN2752 (TO REAR FAN)
TP2752
L2756 PT
L2758 PT
C2758 0.1u[ZF]
L2753 PT
C2753 0.1u[ZF]
C2754 0.1u[ZF]
FAN 7V
IC2751 C0DBEKG00003 (FAN DRIVE)
Vc
VIN
GND
Vout
ADJ
9V
C2765 47u[HG] 16V
C2767 PT
R2777 120k[D]
R2778 27k[D]
3225
C2771 PT
C2769 47u[HG] 16V
RD
TP2759
R2766 PT
C2764 PT
C2766 PT
(TO OPT FAN) CN2754
FAN3_+B
FAN_GND
FAN3_LOCK
L2761 PT
L2759 PT
L2762 PT
C2755 0.1u[ZF]
C2759 0.1u[ZF]
TP2753
FAN3_LOCK_H
FAN 6V
IC2753 C0DBEKG00003 (FAN DRIVE)
TP2757
16V 470u[HG] C2768
RD
C2762 PT
R2768 100k[D]
R2769 27k[D]
C2772 PT
C2774 47u[HG] 16V
R2775 PT
R2774 270k
PT
[COVER SW for HID]
CN2757
COVER_SW
GND
L2754 J0JCC0000077
C2752 0.1u[ZF]
R2752 100
(TO THERMO2)
PT CN2756
L2755 J0JCC0000077
R2751 0
C2751 0.1u[ZF]
[THERMO for HID]
(TO LAMP FAN) CN2753
FAN4_+B
FAN_GND
FAN4_LOCK
PT CN2755
L2763 PT
L2760 PT
L2764 PT
C2756 0.1u[ZF]
C2760 0.1u[ZF]
TP2754
FAN4_LOCK_H
TP2758
FAN 7V
IC2754 C0DBEKG00003 (FAN DRIVE)
16V 470u[HG] C2770
C2763 PT
R2770 120k[D]
R2771 27k[D]
C2773 PT
C2775 47u[HG] 16V
R2773 PT
R2772 PT
L4101 J0JHC0000078
C4101 100u 16V
AV2_L C4103 1u[KB]
AV2_R C4104 1u[KB]
R4103
R4104
C4105
AV1_L C4106 1u[KB]
AV1_R C4107 1u[KB]
YUV2_L C4108 1u[KB]
YUV2_R C4109 1u[KB]
YUV1_L C4110 1u[KB]
YUV1_R C4111 1u[KB]
R4106
R4107
R4108
R4109
R4110
R4111

REAR JACK SCHEMATIC DIAGRAM

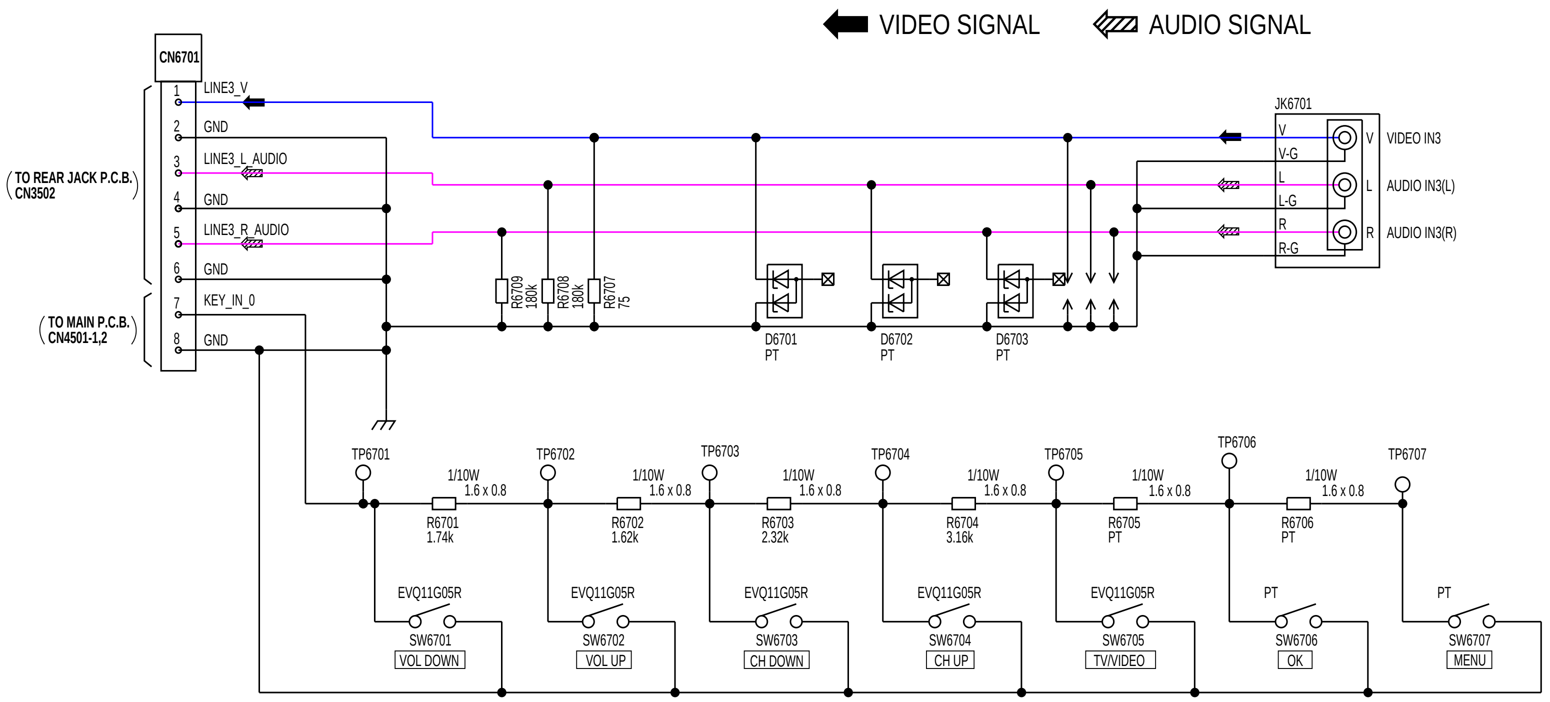
1	2
3	4



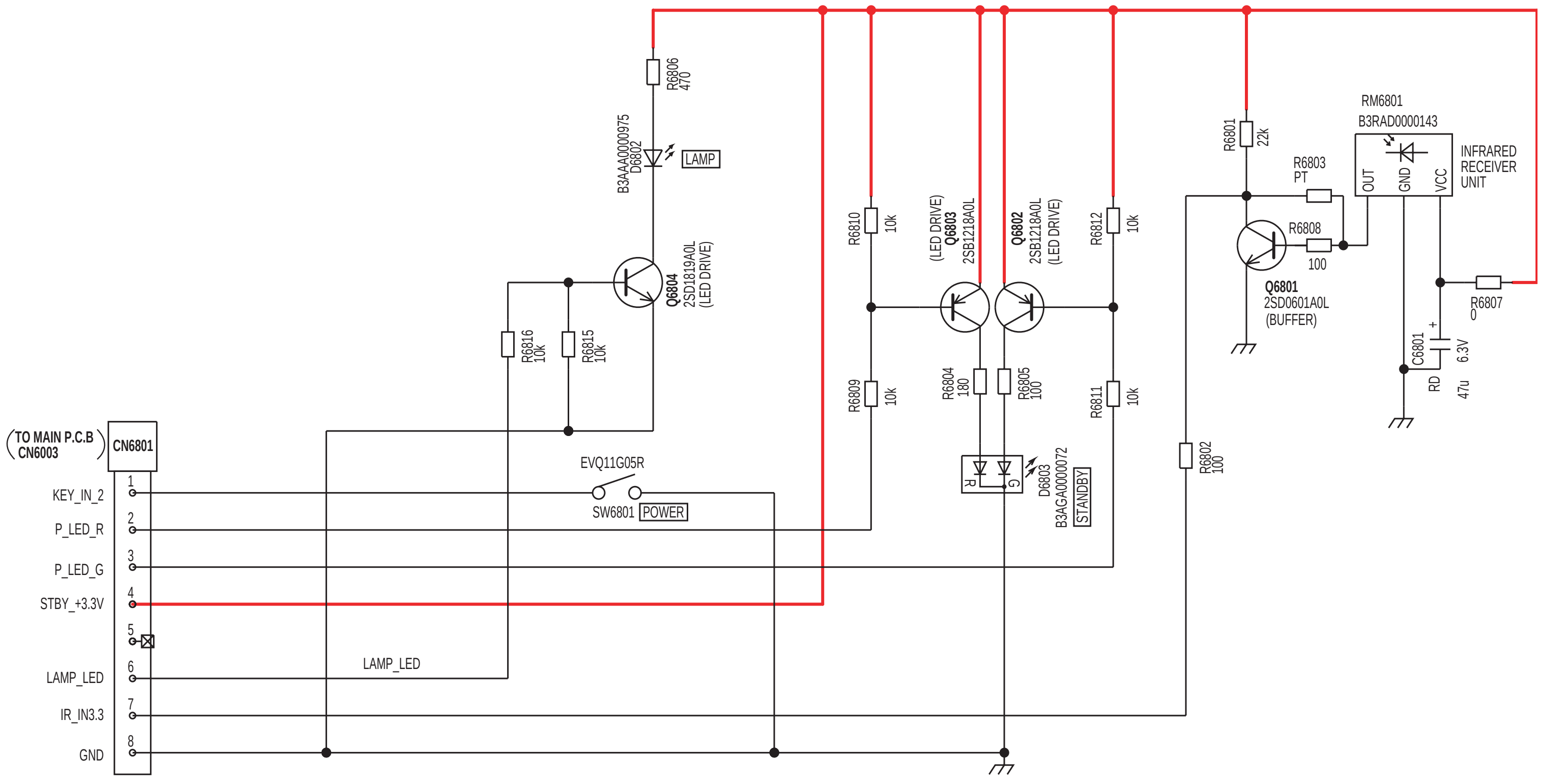
R2789 150k
R2784 18k
R2787 270k
Q2755
2SD0601A0L
(SWITCHING)
TP2759
C2769
47u[HG]
16V
RD
R2766
PT
C2764
PT
C2766
PT
TP2757
IC2753
C0DBEKG00003
(FAN DRIVE)
C2772
PT
C2774
47u[HG]
16V
R2775
PT
R2774
270k
TP2758
IC2754
C0DBEKG00003
(FAN DRIVE)
C2773
PT
C2775
47u[HG]
16V
R2773
PT
R2772
PT
L4101
J0JHC0000078
C4101
100u 16V
SCL_5V
SDA_5V
C4140
1u[KB]
C4139
1u[KB]
R4140 220
R4139 220
C4138 22u 16V
R4137 100k
R4136 22
R4135 22
R4134 82k
IC4101
AN15862A-VT
(AUDIO SW)
AV2_L C4103
AV2_R C4104
AV1_L C4106
AV1_R C4107
YUV2_L C4108
YUV2_R C4109
YUV1_L C4110
YUV1_R C4111
1u[KB]
R4103 220
R4104 220
C4105 0.1u[ZF]
R4106 220
R4107 220
R4108 220
R4109 220
R4110 220
R4111 220
R1 R2 VCC L3 R3 L4 R4 L5
L13 R12 L12 R11 L11 BIAS Q2 SDA SCL
L1 R13 ADR
ROUT1 LOUT1
ROUT2 LOUT2 GND ROUT3 LOUT3 ROUT4 LOUT4
LOUT5 ROUT5
R5 L6 O1
R6 L7 R7 L8 R8 L9 R9 L10 R10
R4112 R4113 R4114 R4115 R4116 R4117 220
R4120 R4121 220
C4112 C4113 C4114 C4115 C4116 C4117 C4120 C4121
1u[KB]
TNR_R DVI1_L DVI1_R DTV_L DTV_R AV3_L AV3_R
R4122
100k
R4126 220 MAIN_R
R4125 220 MAIN_L
R4124 1k MON_R
R4123 1k MON_L
C4124 1u[KB]
C4123 1u[KB]
R4148 100
R4147 100
Q4101
2SB0709A0L
(DRIVE)
Q4102
2SD0601A0L
(MUTE-ON)
Q4103
2SD0601A0L
(MUTE-ON)
R4141 1k
R4146 100
R4145 100
C4141 10u 10V
R4144 1M
R4142 47k
R4143 270k
R4149 180k
R4150 180k
D3530 PT
D3529 PT
D3532 PT
D3531 PT
D3534 PT
D3533 PT
R3512 75
C3511 PT
C3510 PT
R3514 180k
R3513 180k
RED
COMPONENT AUDIO IN1(R)
JK3506
GR GR-G B B-G R R-G
COMPONENT-Y2
COMPONENT-PB2
COMPONENT-PR2
D3536 PT
D3535 PT
R3515 75
D3538 PT
D3537 PT
R3516 75
D3540 PT
D3539 PT
R3517 75
JK3507
W-G WHITE R-G RED
COMPONENT AUDIO IN2(L)
COMPONENT AUDIO IN2(R)
D3542 PT
D3541 PT
D3544 PT
D3543 PT
C3509 PT
C3508 PT
R3518 180k
R3519 180k
JK3509
W-G WHITE R-G RED
DVI AUDIO IN2(L)
DVI AUDIO IN2(R)
D3547 PT
D3545 PT
D3548 PT
D3546 PT
C3513 PT
C3512 PT
R3522 180k
R3521 180k

12.6. FRONT JACK/OPERATION / POWER SWITCH / TUNER SCHEMATIC DIAGRAM

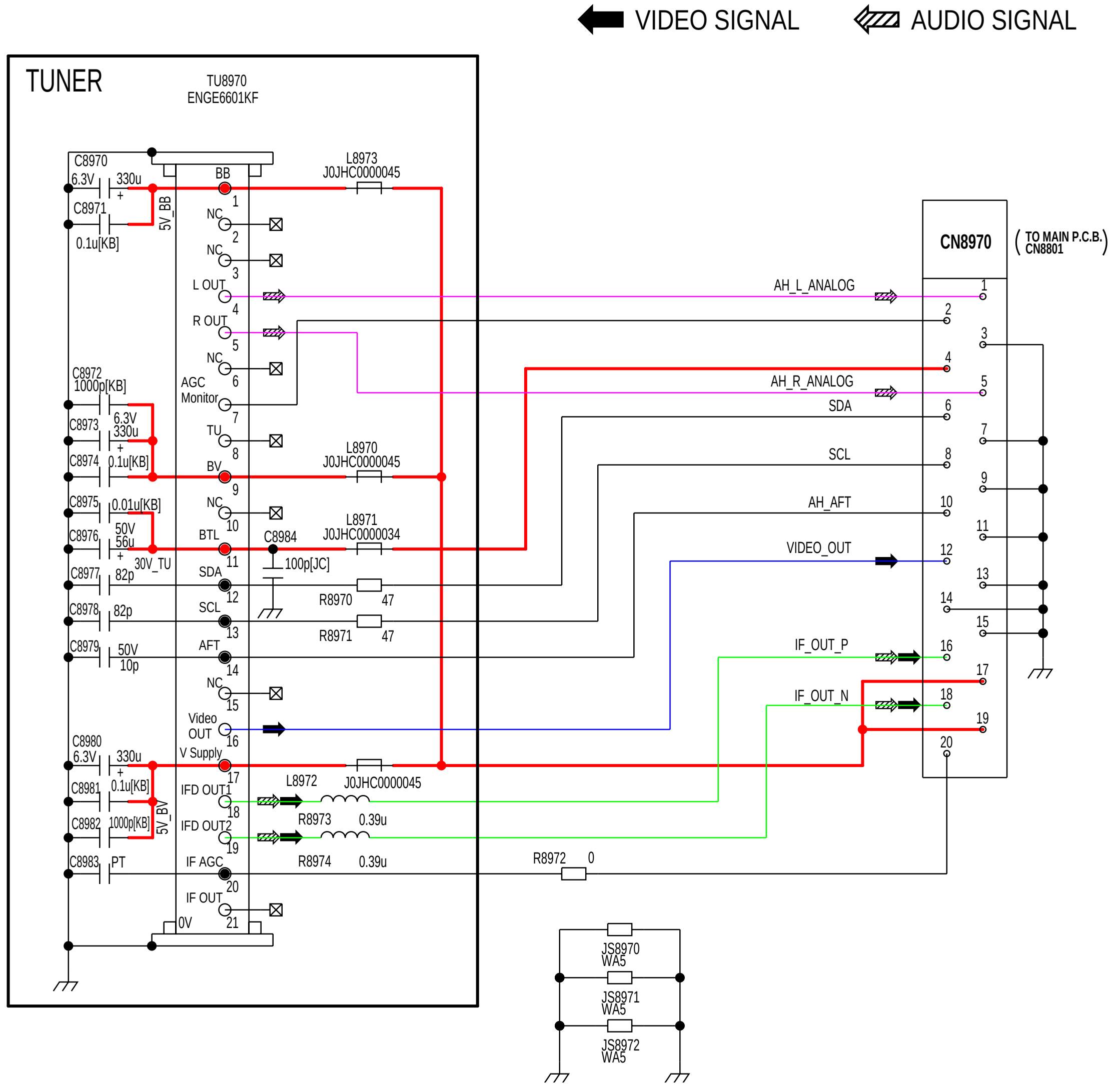
FRONT JACK/OPERATION SCHEMATIC DIAGRAM


VIDEO SIGNAL
AUDIO SIGNAL
CN6701
1 LINE3_V
2 GND
3 LINE3_L_AUDIO
4 GND
5 LINE3_R_AUDIO
6 GND
7 KEY_IN_0
8 GND
TO REAR JACK P.C.B. CN3502
TO MAIN P.C.B. CN4501-1,2
JK6701
V
V-G
L
L-G
R
R-G
VIDEO IN3
AUDIO IN3(L)
AUDIO IN3(R)
R6709 180k
R6708 180k
R6707 75
D6701 PT
D6702 PT
D6703 PT
TP6701
TP6702
TP6703
TP6704
TP6705
TP6706
TP6707
1/10W 1.6 x 0.8
R6701 1.74k
R6702 1.62k
R6703 2.32k
R6704 3.16k
R6705 PT
R6706 PT
EVQ11G05R
SW6701 VOL DOWN
SW6702 VOL UP
SW6703 CH DOWN
SW6704 CH UP
SW6705 TV/VIDEO
PT
SW6706 OK
SW6707 MENU

POWER SWITCH/OPERATION SCHEMATIC DIAGRAM


TO MAIN P.C.B CN6003
CN6801
1 KEY_IN_2
2 P_LED_R
3 P_LED_G
4 STBY_+3.3V
5
6 LAMP_LED
7 IR_IN3.3
8 GND
LAMP_LED
EVQ11G05R
SW6801 POWER
R6806 470
B3AAA0000975 D6802
LAMP
Q6804 2SD1819A0L (LED DRIVE)
R6816 10k
R6815 10k
R6810 10k
R6809 10k
(LED DRIVE) Q6803 2SB1218A0L
Q6802 2SB1218A0L (LED DRIVE)
R6804 180
R6805 100
D6803 B3AGA0000072
R G
STANDBY
R6812 10k
R6811 10k
R6802 100
R6801 22k
R6803 PT
R6808 100
Q6801 2SD0601A0L (BUFFER)
RM6801 B3RAD0000143
OUT GND VCC
INFRARED RECEIVER UNIT
R6807 0
C6801 RD 6.3V 47u

TUNER SCHEMATIC DIAGRAM


VIDEO SIGNAL
AUDIO SIGNAL
TUNER
TU8970 ENGE6601KF
C8970 6.3V 330u
C8971 0.1u[KB]
5V_BB
BB
NC 1
NC 2
L OUT 3
R OUT 4
NC 5
AGC Monitor 6
TU 7
BV 8
NC 9
BTL 10
SDA 11
SCL 12
AFT 13
NC 14
Video OUT 15
V Supply 16
IFD OUT1 17
IFD OUT2 18
IF AGC 19
IF OUT 20
0V 21
C8972 1000p[KB]
C8973 6.3V 330u
C8974 0.1u[KB]
C8975 0.01u[KB]
C8976 50V 56u
30V_TU
C8977 82p
C8978 82p
C8979 50V 10p
C8980 6.3V 330u
C8981 0.1u[KB]
C8982 1000p[KB]
5V_BV
C8983 PT
L8973 J0JHC0000045
L8970 J0JHC0000045
L8971 J0JHC0000034
C8984 100p[JC]
R8970 47
R8971 47
L8972 J0JHC0000045
R8973 0.39u
R8974 0.39u
R8972 0
CN8970
TO MAIN P.C.B. CN8801
AH_L_ANALOG 1
2
3
4
AH_R_ANALOG 5
SDA 6
7
SCL 8
9
AH_AFT 10
11
VIDEO_OUT 12
13
14
15
IF_OUT_P 16
17
IF_OUT_N 18
19
20
JS8970 WA5
JS8971 WA5
JS8972 WA5

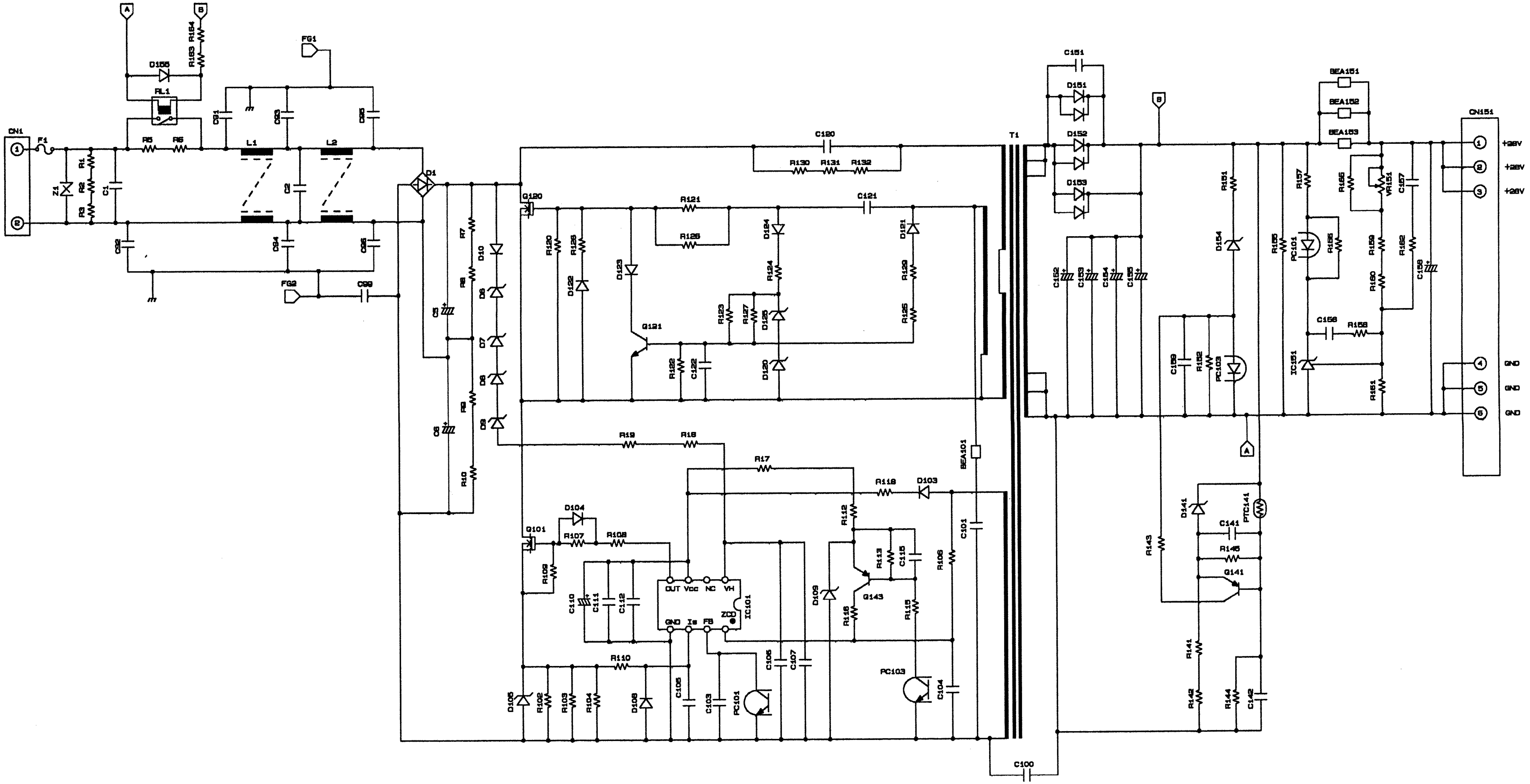
FRONT JACK/OPERATION SCHEMATIC DIAGRAM
POWER SWITCH/OPERATION SCHEMATIC DIAGRAM
TUNER SCHEMATIC DIAGRAM
PT-56LCX70/PT-61LCX70/PT-50LCX7/PT-56LCX7
/PT-61LCX7/PT-50LCX7K/PT-56LCX70-K/PT-61LCX70-K

12.7. RF AMP POWER SUPPLY SCHEMATIC DIAGRAM

RF AMP POWER SUPPLY SCHEMATIC DIAGRAM

"FOR REFERENCE ONLY"

NOTE:
RF AMP POWER SUPPLY P.C.B. IS NOT SERVICEABLE AND IS SUPPLIED AS A UNIT ONLY FOR REPLACEMENT.


A
B
R164
R163
D155
RL1
FG1
CN1
F1
Z1
R1
R2
R3
C1
R5
R6
C31
C33
C35
L1
L2
C2
C32
C34
C36
FG2
C99
D1
R7
R8
R9
R10
D10
D6
D7
D8
D9
C5
C6
Q120
R120
R126
D122
D123
R121
R128
D124
R124
R123
R127
D125
D120
C120
R130
R131
R132
C121
D121
R129
R125
Q121
R122
C122
T1
R19
R18
R17
R118
D103
BEA101
D104
Q101
R107
R108
R109
C110
C111
C112
OUT
Vcc
NC
VH
IC101
GND
Is
FB
ZCD
R112
R113
C115
Q143
D109
R116
R115
R106
C101
R110
D105
R102
R103
R104
D106
C105
C103
PC101
C106
C107
PC103
C104
C100
C151
D151
D152
D153
C152
C153
C154
C155
B
R151
D154
C159
R152
PC103
BEA151
BEA152
BEA153
R157
R165
R156
VR151
C157
R155
PC101
R159
R162
R160
C158
C156
R158
IC151
R161
CN151
+28V
+28V
+28V
GND
GND
GND
A
D141
PTC141
C141
R146
Q141
R143
R141
R142
R144
C142

RF AMP POWER SCHEMATIC DIAGRAM
PT-56LCX70/PT-61LCX70/PT-50LCX7/PT-56LCX7
/PT-61LCX7/PT-50LCX7K/PT-56LCX70-K/PT-61LCX70-K

13 Printed Circuit Board

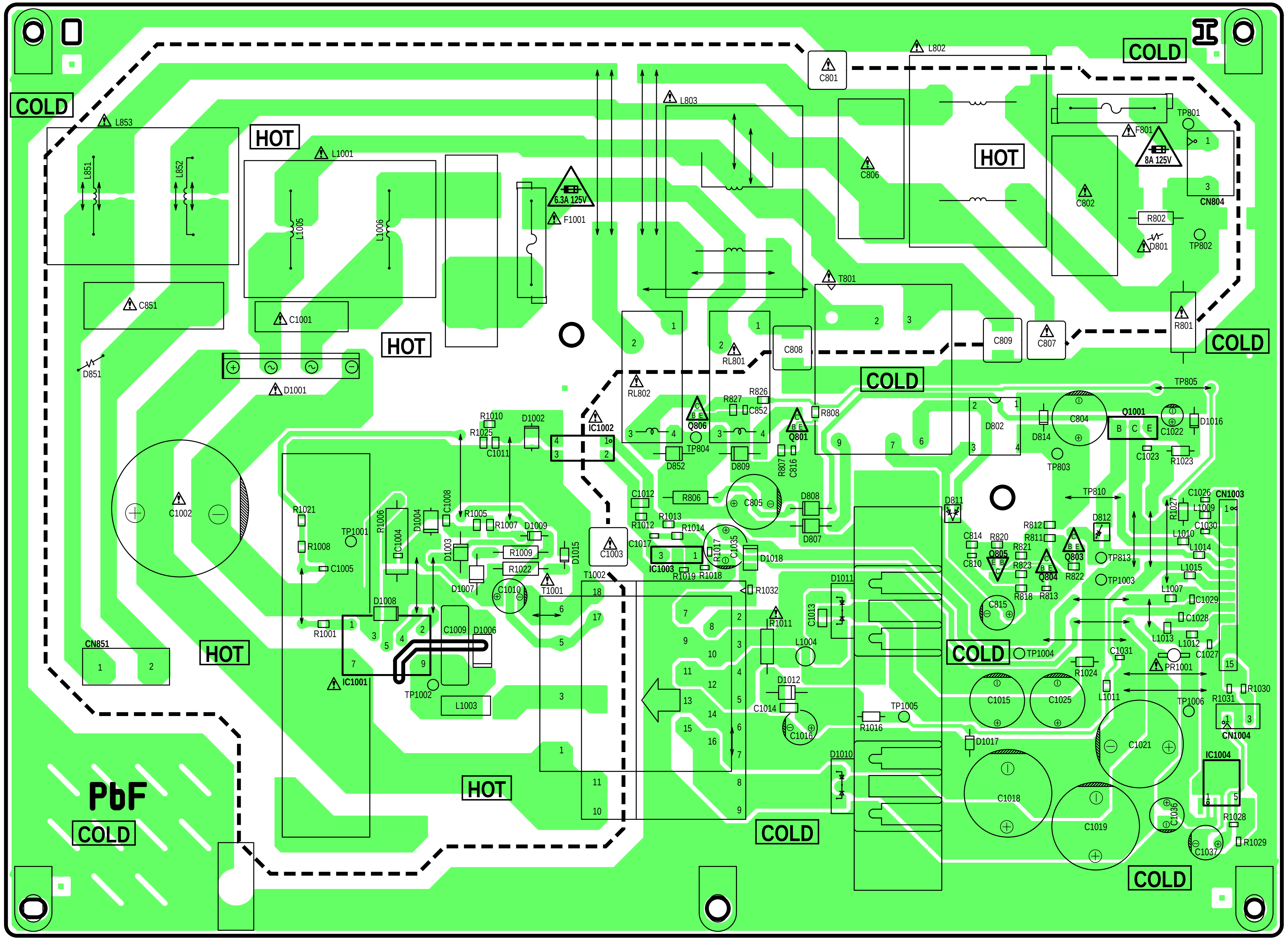
13.1. POWER P.C.B.

POWER P.C.B. LSEP3237A

⚠ 6.3A 125V
CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE 6.3A 125V FUSE.
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES
D' INCENDIE N' UTILISERQUE DES FUSIBLE DE MÉME
TYPE 6.3A 125V

⚠ 8A 125V
CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE 8A 125V FUSE.
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES
D' INCENDIE N' UTILISERQUE DES FUSIBLE DE MÉME
TYPE 8A 125V

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.

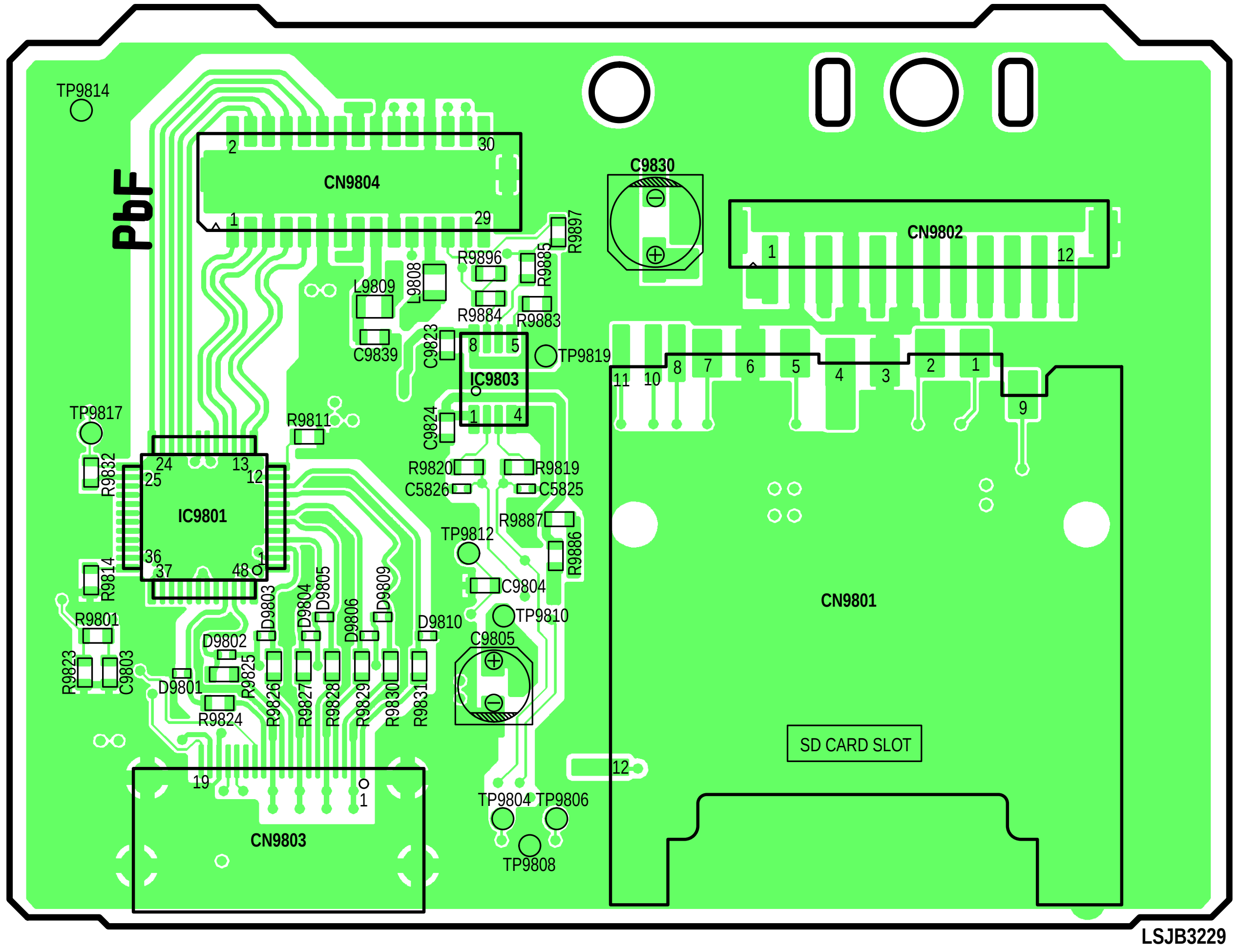

COLD
HOT
PbF
L853
L851
L852
L1001
L1005
L1006
6.3A 125V
F1001
L803
C801
L802
C806
C802
8A 125V
F801
TP801
CN804
R802
D801
TP802
T801
C851
C1001
D851
D1001
C808
RL801
RL802
C809
C807
R801
TP805
IC1002
R1010
R1025
D1002
C1011
R827
R826
C852
Q806
Q801
R808
TP804
D852
D809
R807
C816
D802
D814
C804
Q1001
C1022
D1016
C1023
R1023
TP803
C1002
R1021
TP1001
R1008
C1005
R1006
C1004
D1004
C1008
D1003
R1005
R1007
D1009
R1009
R1022
D1015
C1003
C1012
R806
R1013
R1012
R1014
C805
D808
D807
C1017
IC1003
R1019
R1018
C1035
D1018
T1002
D1007
C1010
T1001
R1032
D811
C814
C810
R820
R812
R811
R821
Q805
R823
Q804
R818
R813
R822
Q803
D812
TP813
TP1003
TP810
R1027
C1026
CN1003
L1009
C1030
L1010
L1014
L1015
L1007
C1029
C1028
L1013
L1012
C1031
C1027
PR1001
C815
D1011
C1013
R1011
L1004
D1012
C1014
C1016
TP1004
R1024
L1011
D1008
R1001
C1009
D1006
IC1001
TP1002
L1003
CN851
C1015
C1025
TP1005
R1016
D1017
D1010
C1018
C1019
C1021
TP1006
R1031
R1030
CN1004
IC1004
C1036
R1028
C1037
R1029
HOT CIRCUIT. BE CAREFUL AND USE AN ISOLATION TRANSFORMER WHEN SERVICING.
LSJB3237

13.2. SD/HDMI P.C.B.

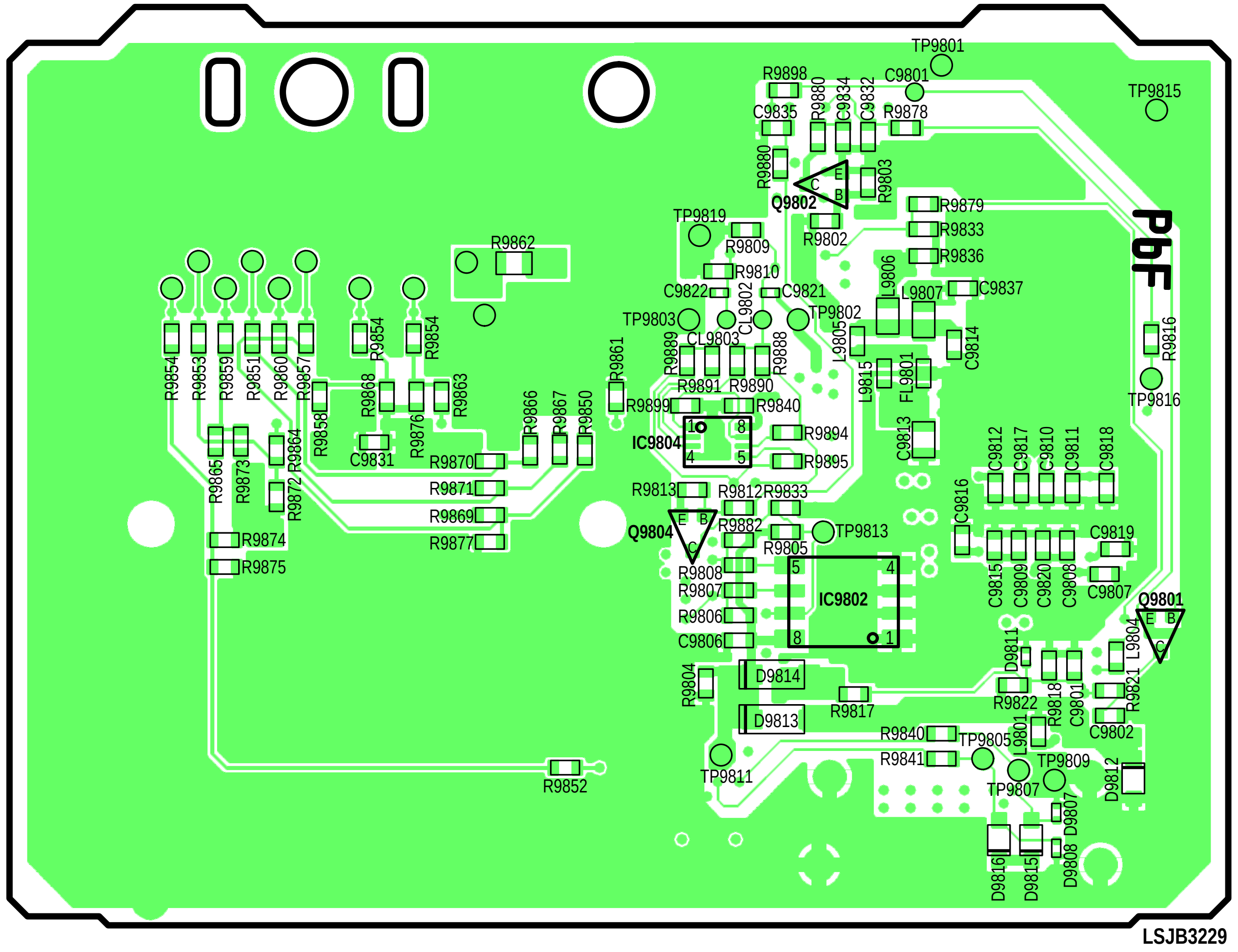
SD/HDMI P.C.B. LSEP3229A

NOTE: MULTILAYER P.C.B.
THIS P.C.B. IS Multi-Layer P.C.B. THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE. LAYOUT PATETRNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.

(COMPONENT SIDE)


TP9814
PbF
CN9804
2
30
1
29
C9830
CN9802
1
12
R9897
R9885
R9896
R9884
R9883
L9809
L9808
C9839
C9823
IC9803
8
5
1
4
TP9819
C9824
TP9817
R9811
R9832
IC9801
24
13
25
12
36
37
48
1
R9814
R9820
C5826
R9819
C5825
R9887
R9886
TP9812
C9804
TP9810
C9805
R9801
R9823
C9803
D9801
D9802
R9824
R9825
R9826
R9827
R9828
R9829
R9830
R9831
D9803
D9804
D9805
D9806
D9809
D9810
11
10
9
8
7
6
5
4
3
2
1
CN9801
SD CARD SLOT
12
19
1
CN9803
TP9804
TP9806
TP9808
LSJB3229

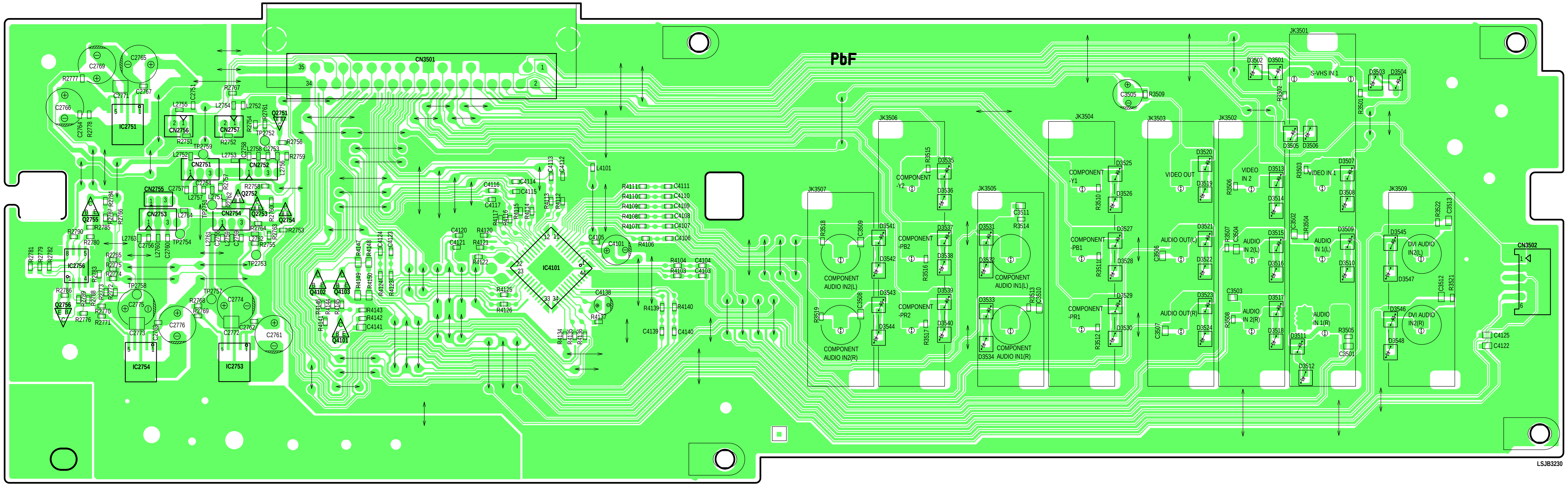
(FOIL SIDE)


TP9801
C9801
TP9815
R9898
C9835
R9880
C9834
C9832
R9878
R9880
Q9802
C
E
B
R9803
R9879
R9833
R9836
TP9819
R9809
R9802
R9810
R9862
C9822
CL9802
C9821
L9806
L9807
C9837
PbF
TP9803
TP9802
CL9803
R9889
R9888
L9805
L9815
FL9801
C9814
R9816
R9891
R9890
TP9816
R9854
R9853
R9859
R9851
R9860
R9857
R9858
R9854
R9868
R9854
R9876
R9863
R9866
R9867
R9850
R9861
R9899
R9840
IC9804
1
8
4
5
R9894
R9895
R9865
R9873
R9872
R9864
C9831
R9870
R9871
R9869
R9877
R9813
R9812
R9833
Q9804
E
B
C
R9882
TP9813
R9805
C9813
C9816
C9812
C9817
C9810
C9811
C9818
C9819
R9874
R9875
R9808
R9807
R9806
C9806
IC9802
5
4
8
1
C9815
C9809
C9820
C9808
C9807
Q9801
E
B
C
D9811
L9804
R9821
D9814
R9804
D9813
R9817
R9822
R9818
C9801
C9802
R9840
TP9805
L9801
R9841
TP9809
TP9811
R9852
TP9807
D9812
D9807
D9808
D9815
D9816
LSJB3229

SD/HDMI P.C.B. LSEP3229A
PT-56LCX70/PT-61LCX70/PT-50LCX7/PT-56LCX7
/PT-61LCX7/PT-50LCX7K/PT-56LCX70-K/PT-61LCX70-K

13.3. REAR JACK P.C.B.

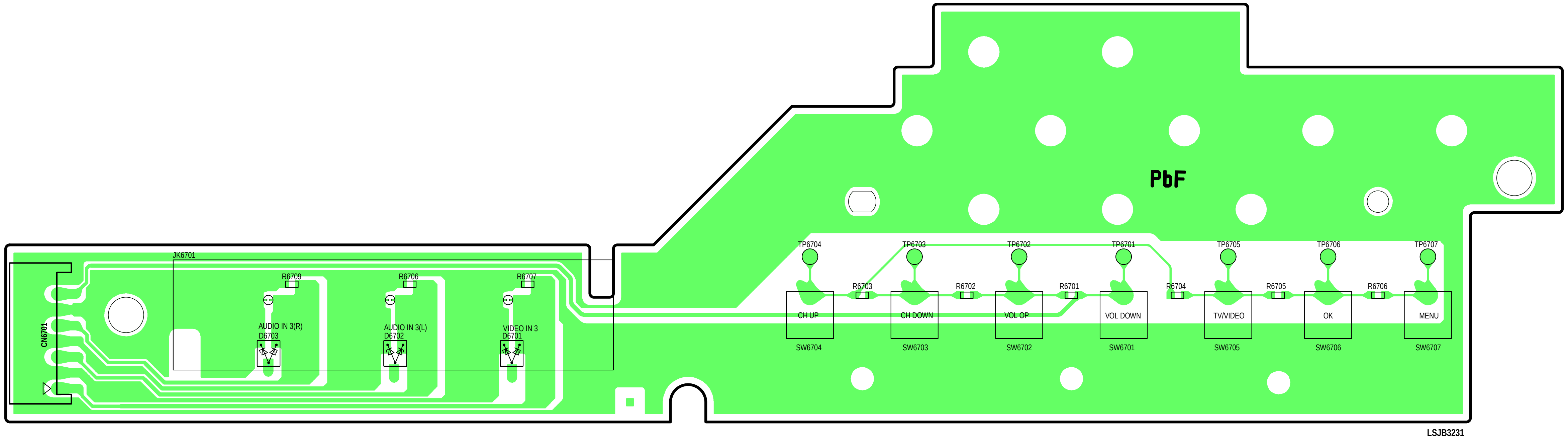
REAR JACK P.C.B. LSEP3230A


CN3501
PbF
IC2751
IC2753
IC2754
IC2756
IC4101
CN2751
CN2752
CN2753
CN2754
CN2755
CN2756
CN2757
Q2751
Q2752
Q2753
Q2754
Q2755
Q2756
Q4101
Q4102
Q4103
JK3501
JK3502
JK3503
JK3504
JK3505
JK3506
JK3507
JK3509
CN3502
S-VHS IN 1
VIDEO IN 1
VIDEO IN 2
AUDIO IN 1(L)
AUDIO IN 1(R)
AUDIO IN 2(L)
AUDIO IN 2(R)
VIDEO OUT
AUDIO OUT(L)
AUDIO OUT(R)
COMPONENT -Y1
COMPONENT -PB1
COMPONENT -PR1
COMPONENT -Y2
COMPONENT -PB2
COMPONENT -PR2
COMPONENT AUDIO IN1(L)
COMPONENT AUDIO IN1(R)
COMPONENT AUDIO IN2(L)
COMPONENT AUDIO IN2(R)
DVI AUDIO IN2(L)
DVI AUDIO IN2(R)
L4101
LSJB3230

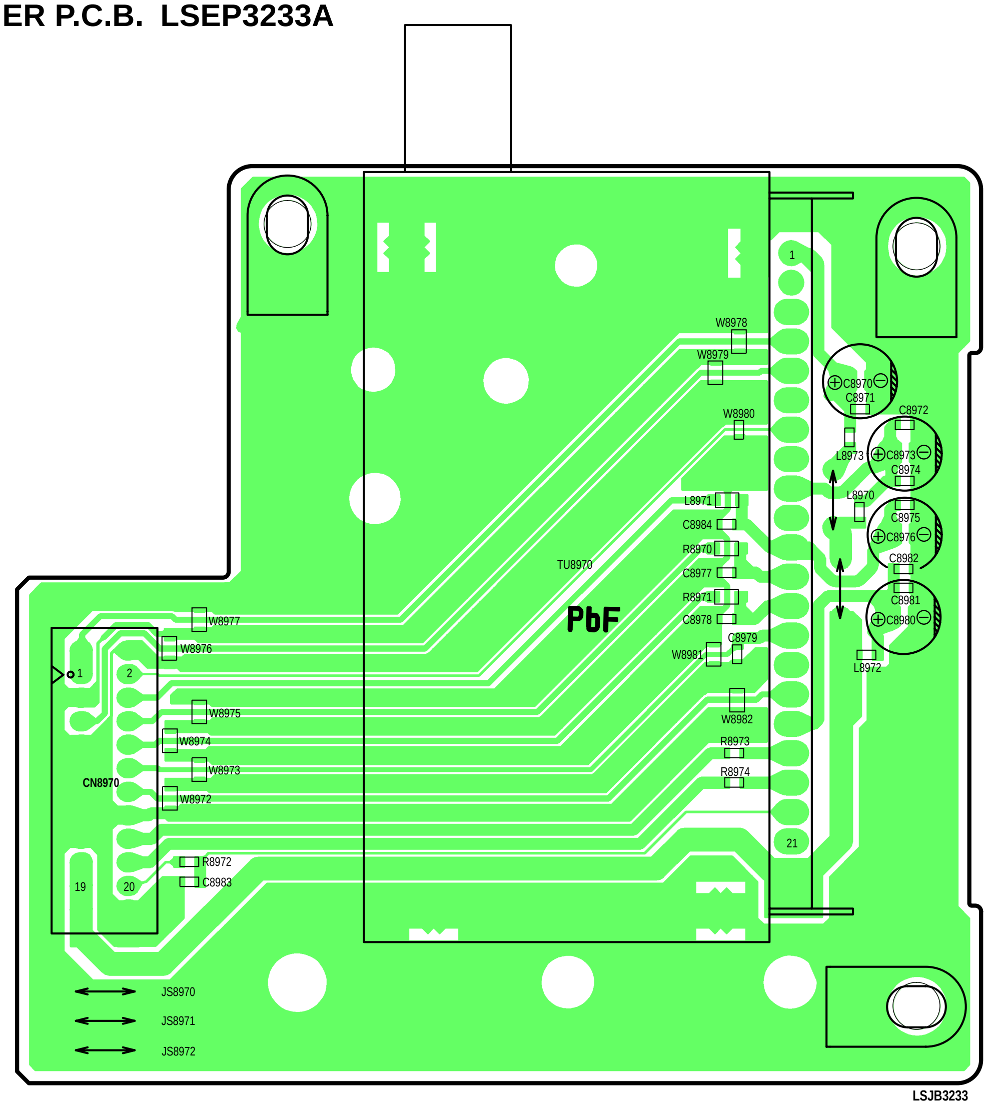
REAR JACK P.C.B. LSEP3230A
PT-56LCX70/PT-61LCX70/PT-50LCX7/PT-56LCX7
/PT-61LCX7/PT-50LCX7K/PT-56LCX70-K/PT-61LCX70-K

13.4. FRONT JACK/OPERATION P.C.B. / TUNER P.C.B. / POWER SWITCH/OPERATION P.C.B.

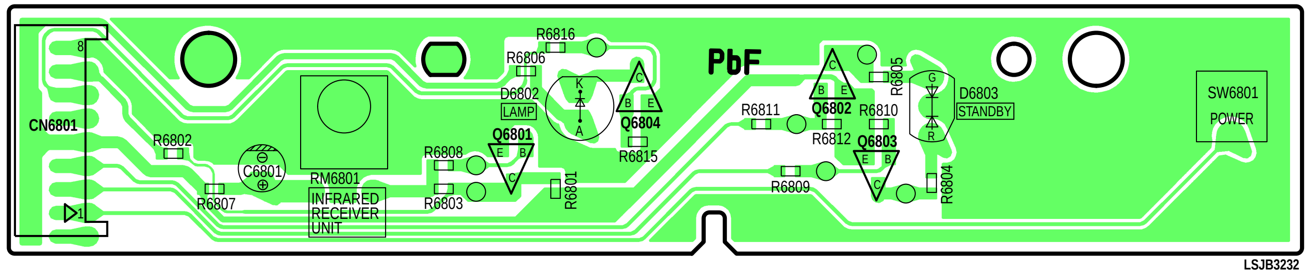
FRONT JACK/OPERATION P.C.B. LSEP3231A


PbF
JK6701
CN6701
R6709
R6706
R6707
AUDIO IN 3(R)
D6703
AUDIO IN 3(L)
D6702
VIDEO IN 3
D6701
TP6704
TP6703
TP6702
TP6701
TP6705
TP6706
TP6707
R6703
R6702
R6701
R6704
R6705
R6706
CH UP
CH DOWN
VOL OP
VOL DOWN
TV/VIDEO
OK
MENU
SW6704
SW6703
SW6702
SW6701
SW6705
SW6706
SW6707
LSJB3231

TUNER P.C.B. LSEP3233A


PbF
TU8970
CN8970
1
2
19
20
21
W8977
W8976
W8975
W8974
W8973
W8972
R8972
C8983
W8978
W8979
W8980
L8971
C8984
R8970
C8977
R8971
C8978
C8979
W8981
W8982
R8973
R8974
C8970
C8971
C8972
L8973
C8973
C8974
L8970
C8975
C8976
C8982
C8981
C8980
L8972
JS8970
JS8971
JS8972
LSJB3233

POWER SWITCH/OPERATION P.C.B. LSEP3232A


PbF
CN6801
8
1
R6802
R6807
C6801
RM6801
INFRARED RECEIVER UNIT
R6816
R6806
D6802
LAMP
Q6801
R6808
R6803
R6801
Q6804
R6815
R6811
Q6802
R6810
R6812
Q6803
R6809
R6805
R6804
D6803
STANDBY
SW6801
POWER
LSJB3232

FRONT JACK/OPERATION P.C.B. LSEP3231A
TUNER P.C.B. LSEP3233A
POWER SWITCH/OPERATION P.C.B. LSEP3232A
PT-56LCX70/PT-61LCX70/PT-50LCX7/PT-56LCX7
/PT-61LCX7/PT-50LCX7K/PT-56LCX70-K/PT-61LCX70-K

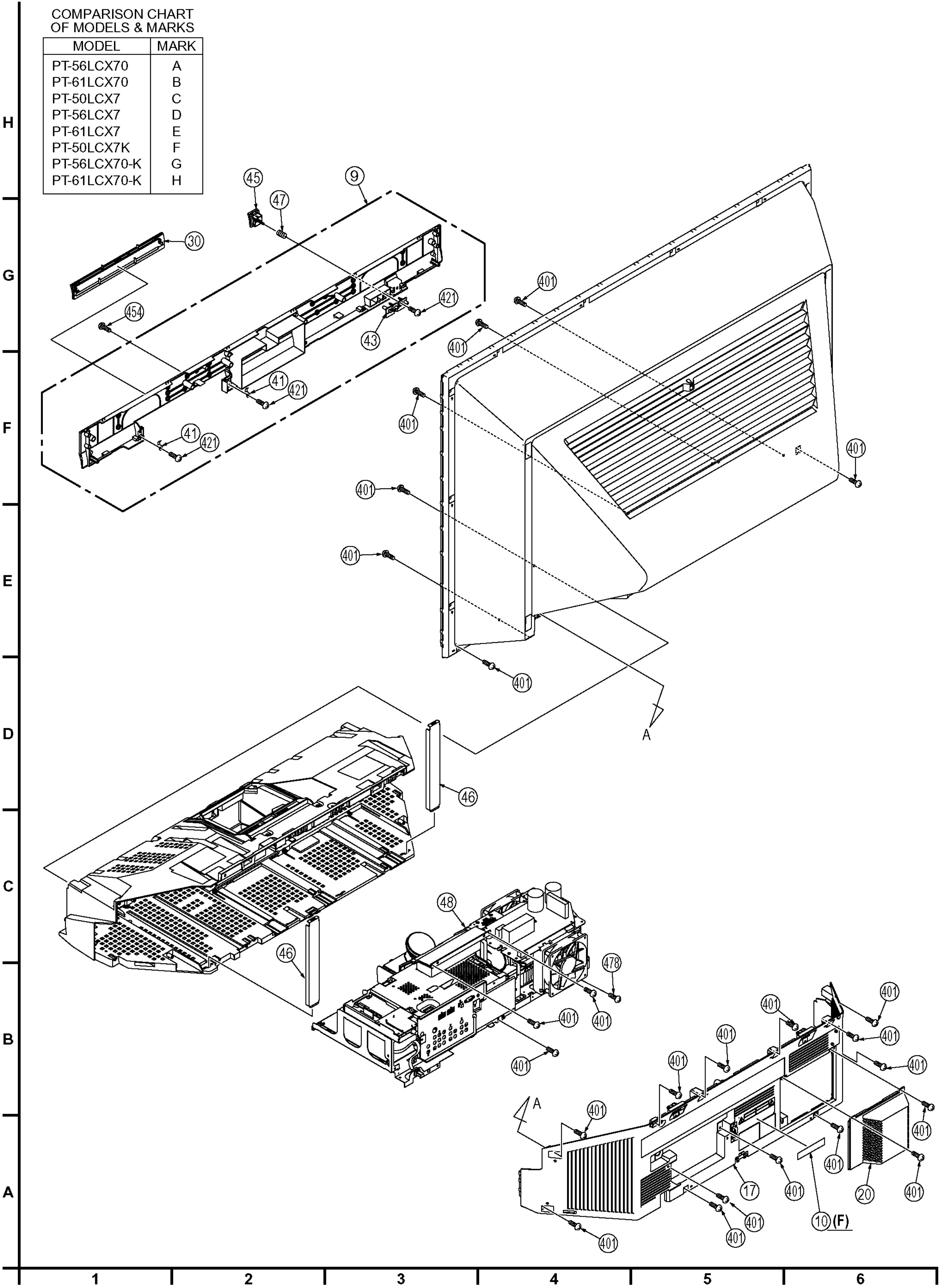
14 Exploded Views

14.1. MAIN PARTS SECTION

❶ 50 INCH MAIN PARTS SECTION (Models: C, F)

COMPARISON CHART
OF MODELS & MARKS

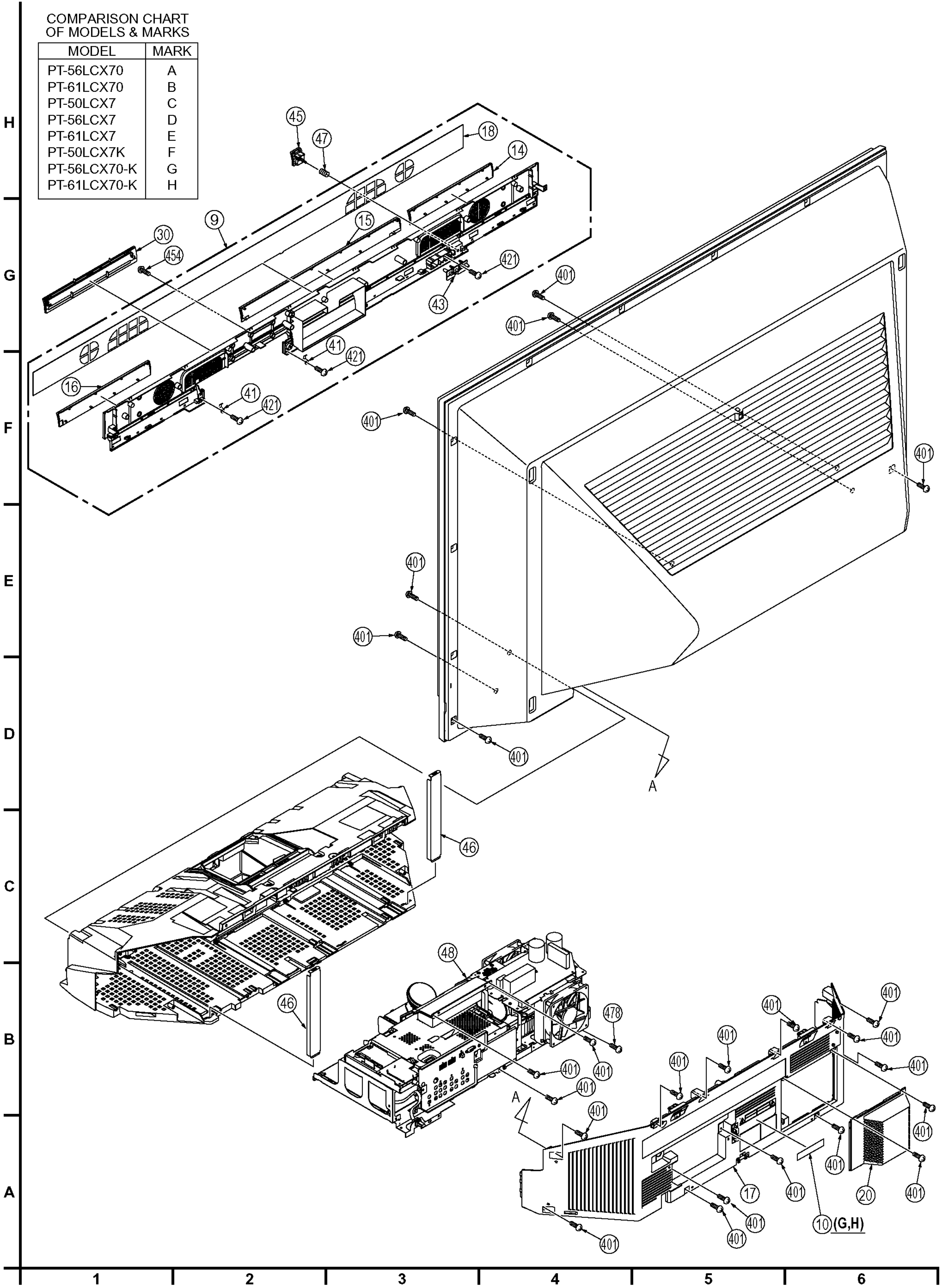
MODEL	MARK
PT-56LCX70	A
PT-61LCX70	B
PT-50LCX7	C
PT-56LCX7	D
PT-61LCX7	E
PT-50LCX7K	F
PT-56LCX70-K	G
PT-61LCX70-K	H


H
G
F
E
D
C
B
A
1
2
3
4
5
6
45
47
9
30
454
421
43
41
421
41
421
401
401
401
401
401
401
401
A
46
46
48
478
401
401
401
401
401
401
401
401
401
401
401
401
401
401
401
A
17
20
10 (F)

❶ 56/61 INCH MAIN PARTS SECTION (Models: A, B, D, E, G, H)

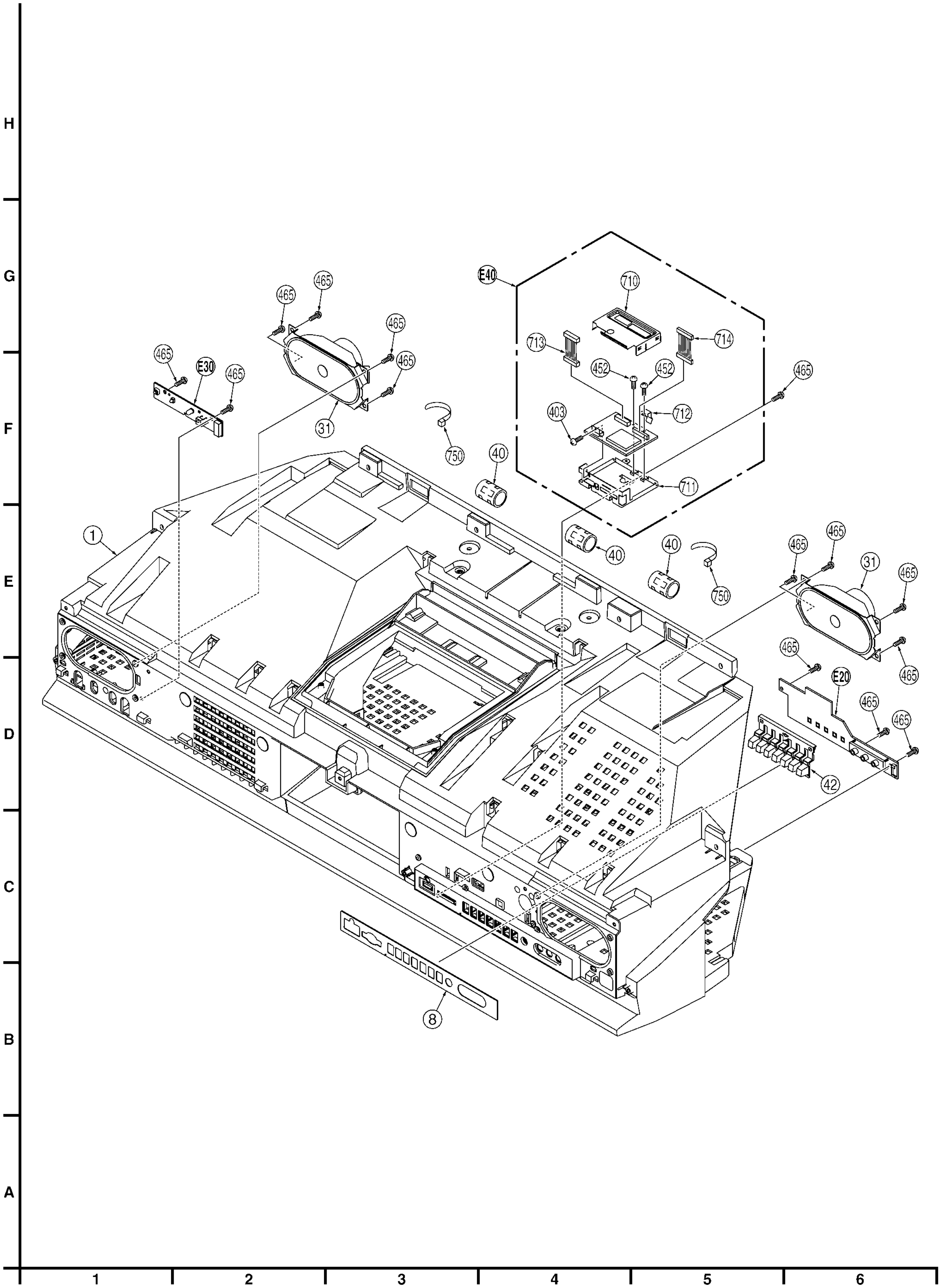
COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PT-56LCX70	A
PT-61LCX70	B
PT-50LCX7	C
PT-56LCX7	D
PT-61LCX7	E
PT-50LCX7K	F
PT-56LCX70-K	G
PT-61LCX70-K	H


H
G
F
E
D
C
B
A
1
2
3
4
5
6
45
47
18
14
9
15
30
454
421
43
41
421
16
41
421
401
401
401
401
401
401
401
A
46
46
48
478
401
401
401
401
401
401
401
401
401
401
401
401
401
A
17
401
401
401
10 (G,H)
20
401
401
401

14.2. BASE BODY SECTION

❷ BASE BODY SECTION

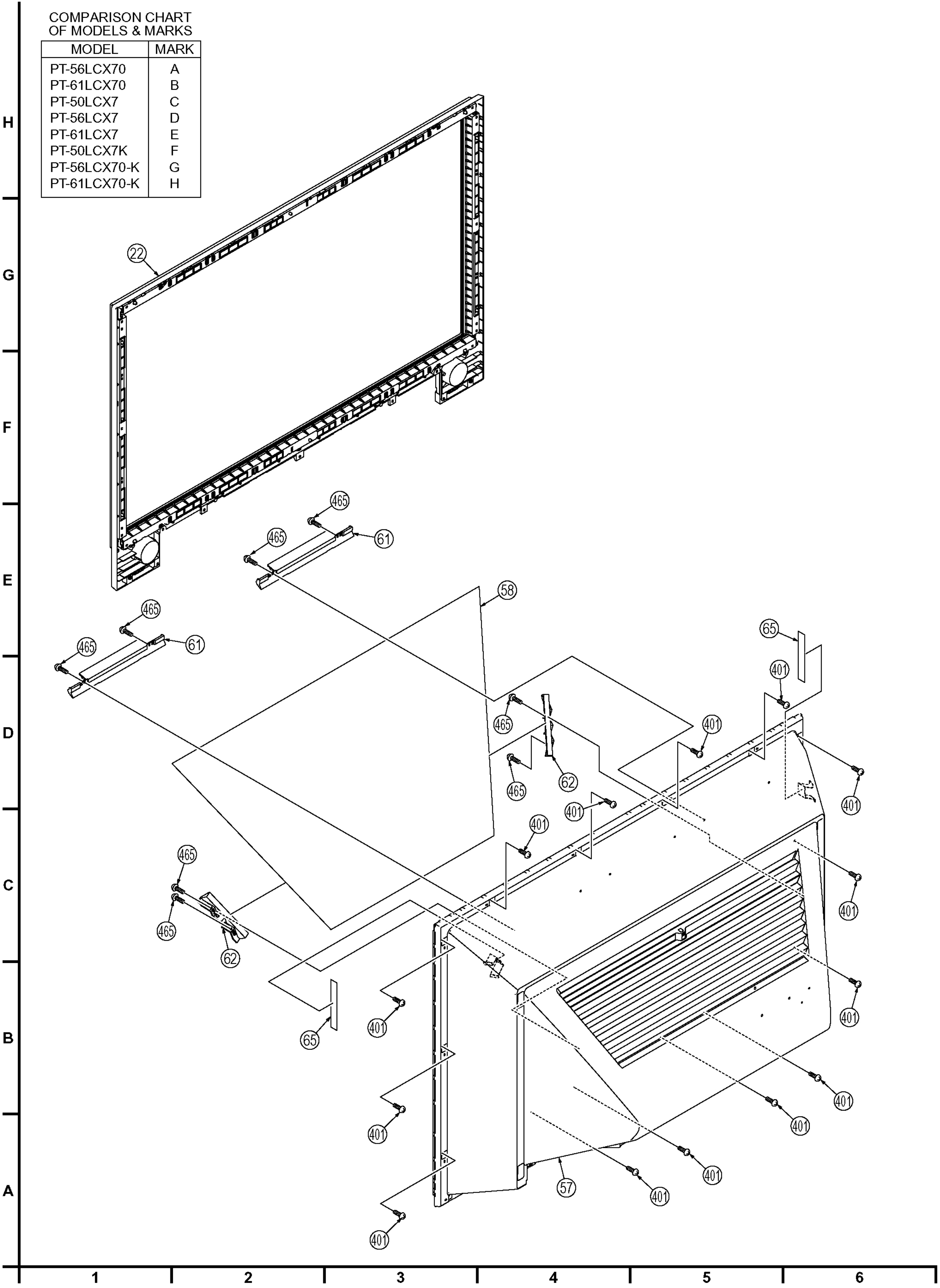

H
G
F
E
D
C
B
A
1
2
3
4
5
6
E40
710
713
714
452
452
465
403
712
711
465
465
465
465
465
E30
465
31
750
40
1
40
40
750
465
465
31
465
465
465
E20
465
465
42
8

14.3. DISPLAY SECTION

❸ 50 INCH DISPLAY SECTION (Models: C, F)

COMPARISON CHART
OF MODELS & MARKS

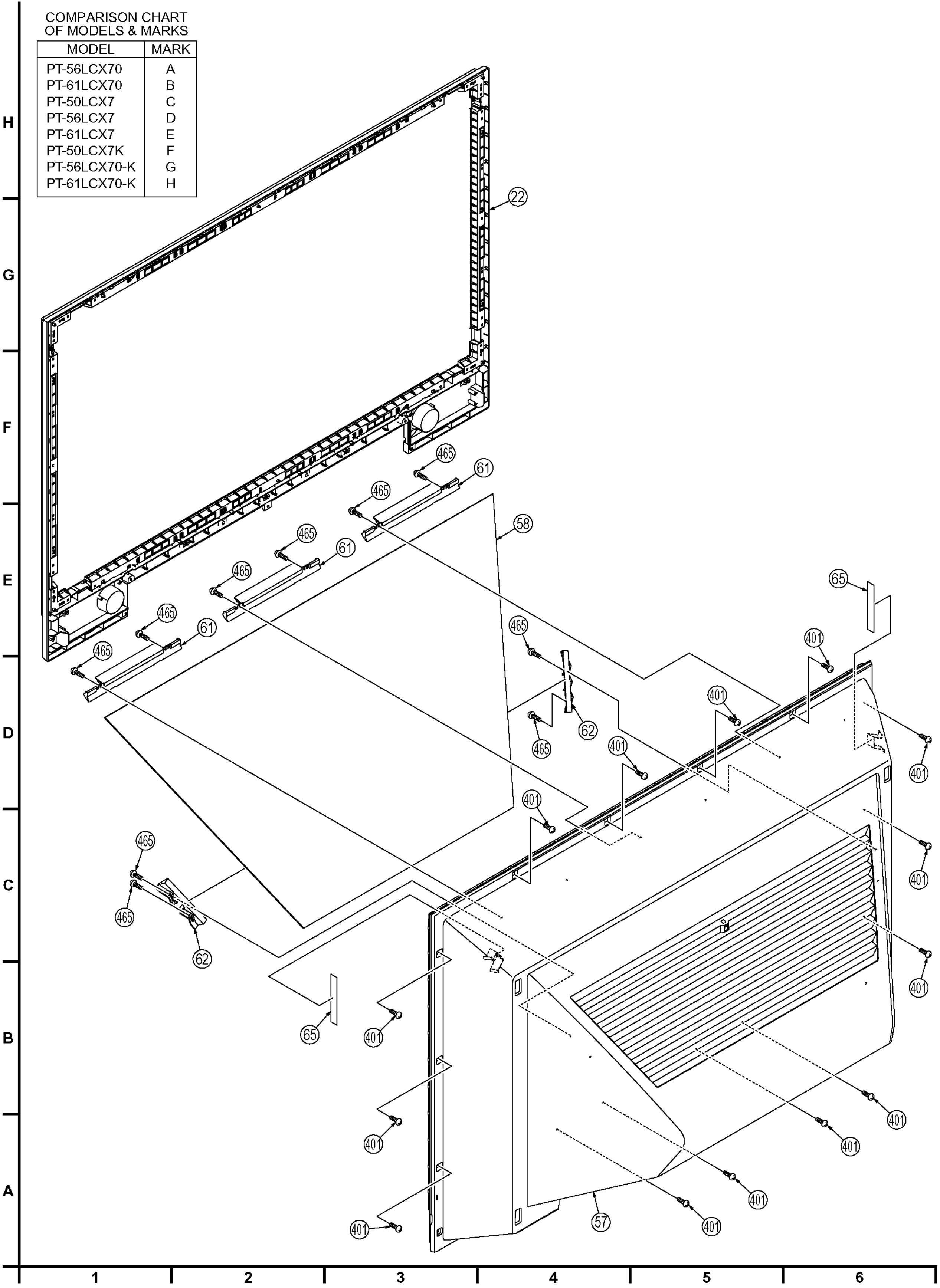
MODEL	MARK
PT-56LCX70	A
PT-61LCX70	B
PT-50LCX7	C
PT-56LCX7	D
PT-61LCX7	E
PT-50LCX7K	F
PT-56LCX70-K	G
PT-61LCX70-K	H


H
G
F
E
D
C
B
A
22
465
465
61
58
465
465
61
65
401
465
401
401
465
62
401
401
401
465
465
62
401
401
65
401
401
401
401
401
401
401
57
401
1
2
3
4
5
6

❸ 56/61 INCH DISPLAY SECTION (Models: A, B, D, E, G, H)

COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PT-56LCX70	A
PT-61LCX70	B
PT-50LCX7	C
PT-56LCX7	D
PT-61LCX7	E
PT-50LCX7K	F
PT-56LCX70-K	G
PT-61LCX70-K	H

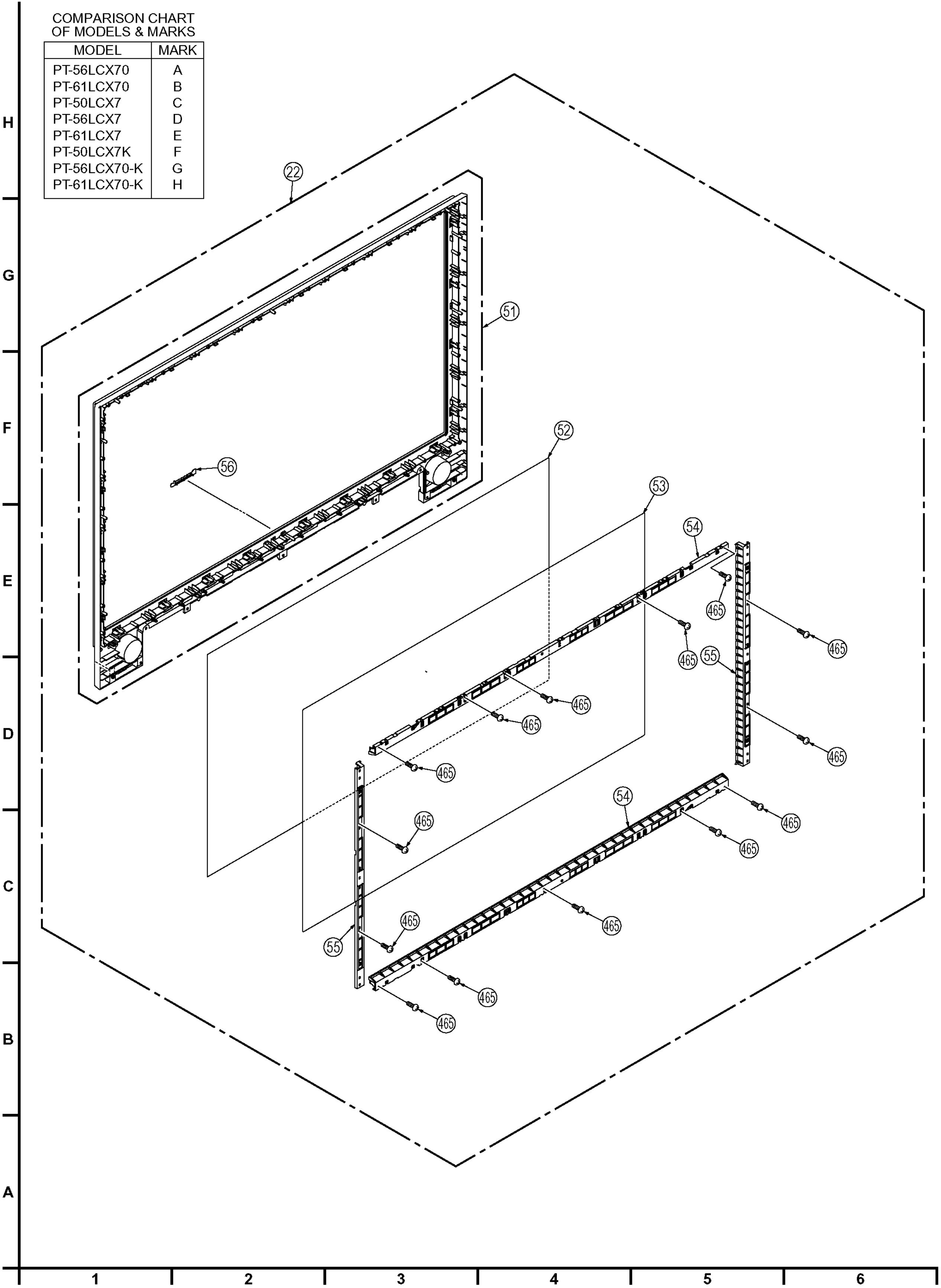

H
G
F
E
D
C
B
A
1
2
3
4
5
6
22
465
61
58
65
401
62
57

14.4. SCREEN SECTION

❹ 50 INCH SCREEN SECTION (Models: C, F)

COMPARISON CHART OF MODELS & MARKS

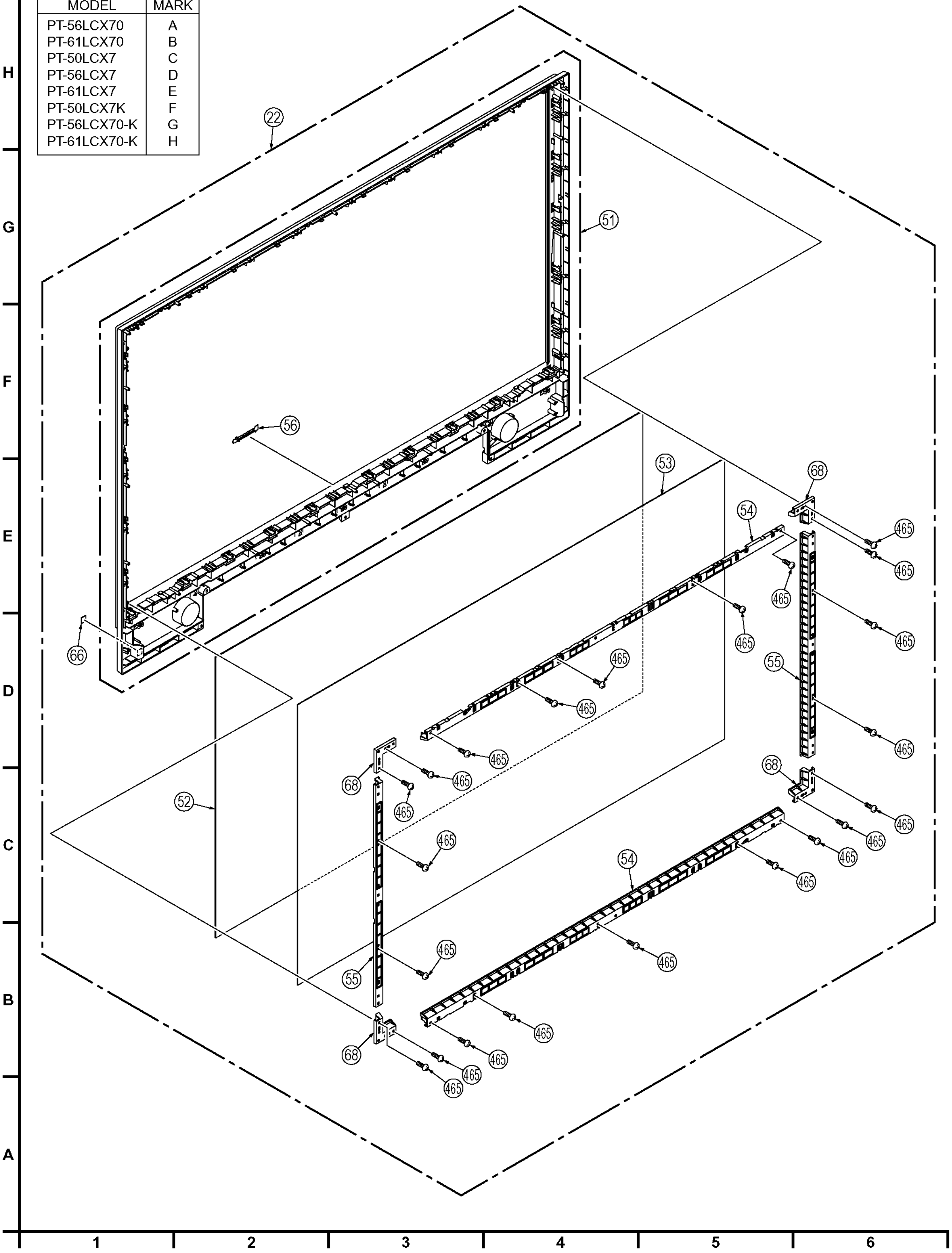
MODEL	MARK
PT-56LCX70	A
PT-61LCX70	B
PT-50LCX7	C
PT-56LCX7	D
PT-61LCX7	E
PT-50LCX7K	F
PT-56LCX70-K	G
PT-61LCX70-K	H


H
G
F
E
D
C
B
A
1
2
3
4
5
6
22
51
56
52
53
54
55
54
55
465
465
465
465
465
465
465
465
465
465
465
465
465
465
465

❹ 56/61 INCH SCREEN SECTION (Models: A, B, D, E, G, H)

COMPARISON CHART
OF MODELS & MARKS

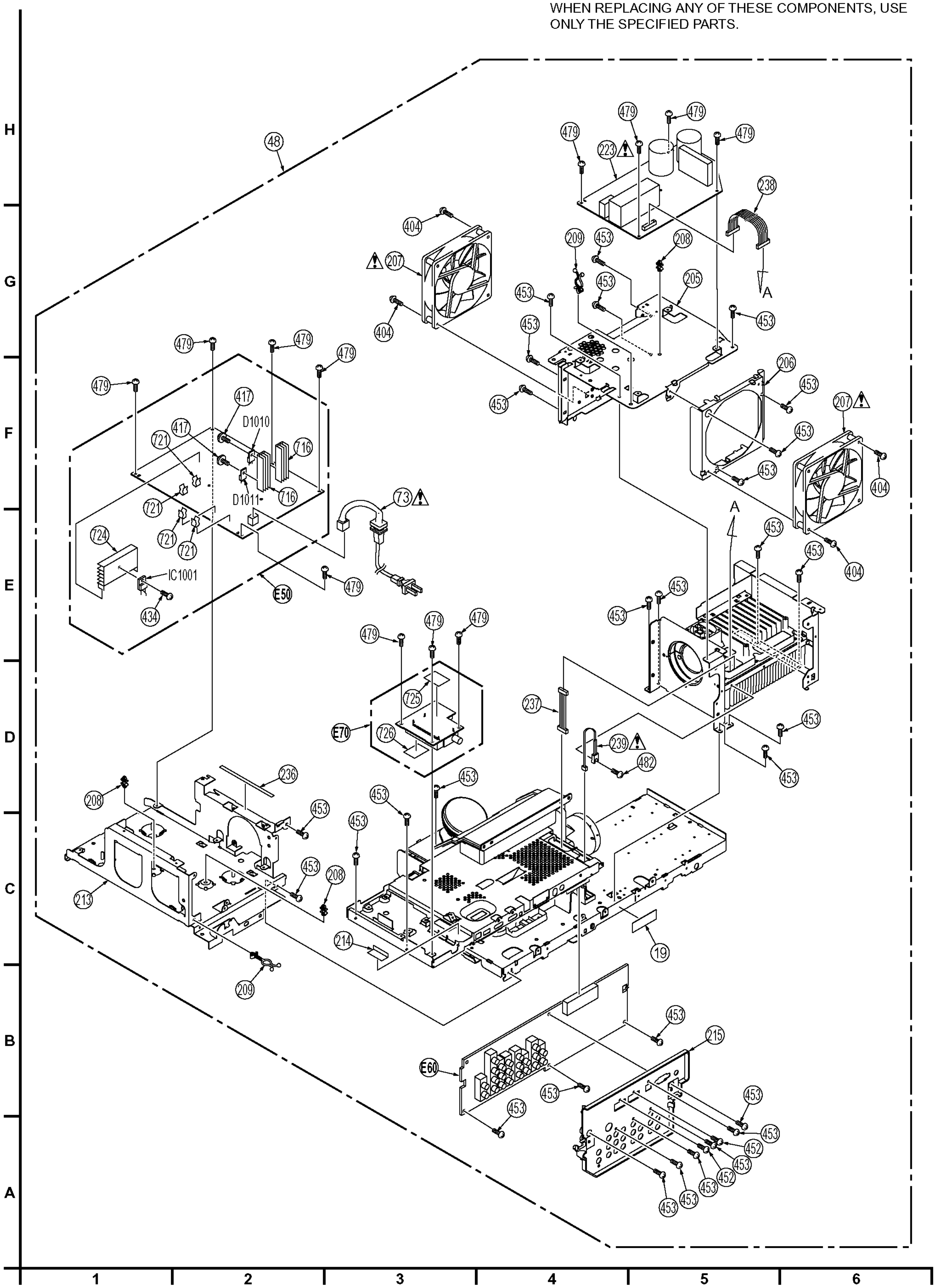
MODEL	MARK
PT-56LCX70	A
PT-61LCX70	B
PT-50LCX7	C
PT-56LCX7	D
PT-61LCX7	E
PT-50LCX7K	F
PT-56LCX70-K	G
PT-61LCX70-K	H


H
G
F
E
D
C
B
A
1
2
3
4
5
6
22
51
56
53
68
54
465
66
55
52

14.5. OPT/TV UNIT SECTION

❺ OPT/TV UNIT SECTION

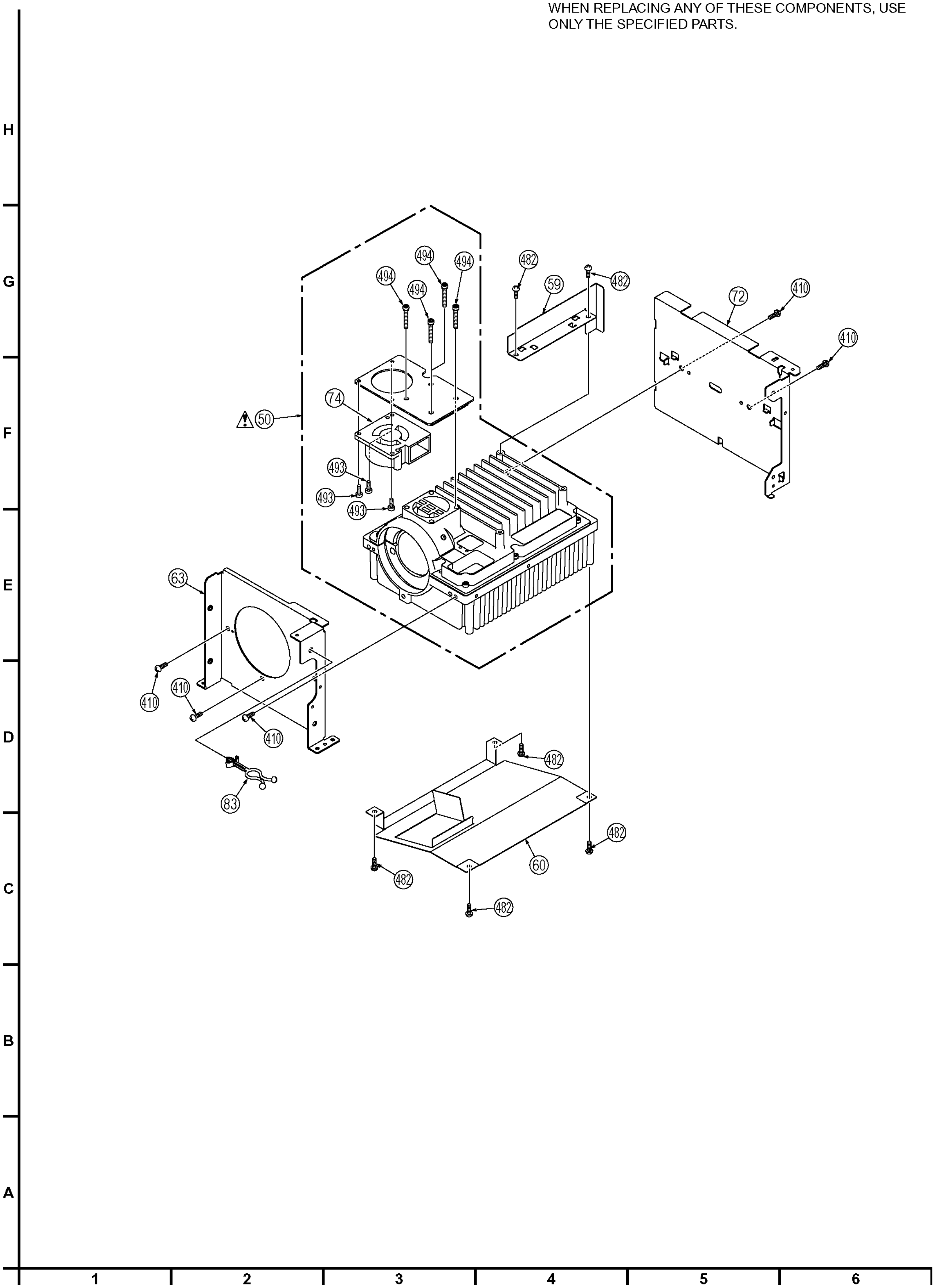
IMPORTANT SAFETY NOTICE
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.


H
G
F
E
D
C
B
A
1
2
3
4
5
6
48
479
479
479
479
223 ⚠
238
A
404
207 ⚠
209
453
208
453
205
453
404
453
453
453
479
479
479
479
417
417
D1010
721
716
721
716
D1011
721
721
73 ⚠
724
IC1001
434
E50
479
206
453
207 ⚠
453
453
404
A
453
453
404
453
453
479
479
479
725
726
E70
237
239 ⚠
482
453
453
236
208
453
453
453
453
453
208
213
214
209
19
453
215
E60
453
453
453
453
452
453
452
453
453
453
453

14.6. LAMP UNIT SECTION

❻ LAMP UNIT SECTION

IMPORTANT SAFETY NOTICE
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

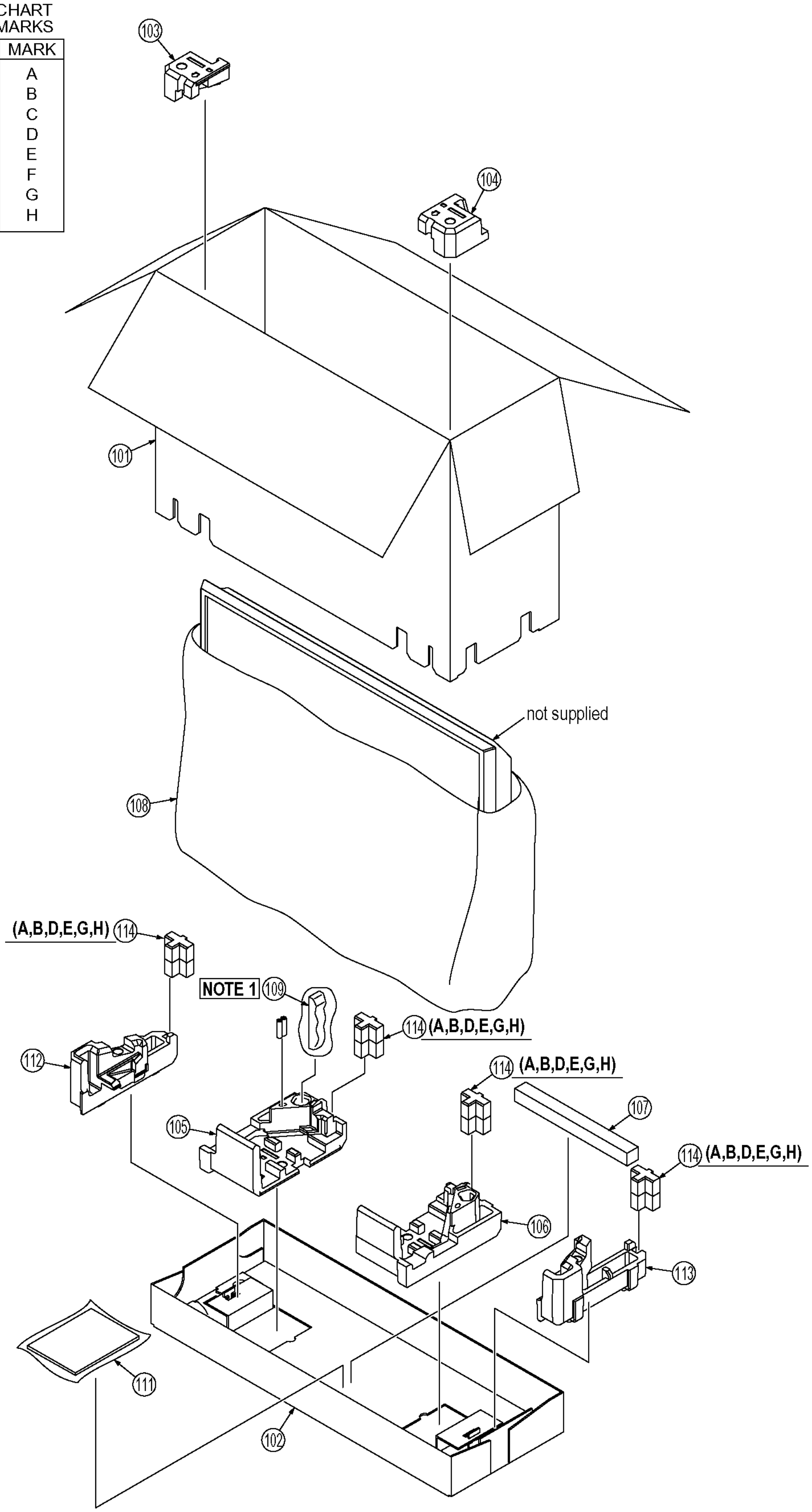

H
G
F
E
D
C
B
A
1
2
3
4
5
6
494
494
494
494
482
59
482
72
410
410
⚠ 50
74
493
493
493
63
410
410
410
482
83
482
60
482
482

14.7. PACKING PARTS AND ACCESSORIES SECTION

❼ PACKING PARTS AND ACCESSORIES SECTION

COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PT-56LCX70	A
PT-61LCX70	B
PT-50LCX7	C
PT-56LCX7	D
PT-61LCX7	E
PT-50LCX7K	F
PT-56LCX70-K	G
PT-61LCX70-K	H


103
104
101
not supplied
108
(A,B,D,E,G,H) 114
NOTE 1 109
114 (A,B,D,E,G,H)
112
114 (A,B,D,E,G,H)
107
105
114 (A,B,D,E,G,H)
106
113
111
102

NOTE 1 The Infrared Remote Control Unit (Ref. No. 109) replacement part is available as a complete assembly unit only. Do not try to disassemble the Infrared Remote Control Unit.

15 Replacement Parts List

BEFORE REPLACING PARTS, READ THE FOLLOWING:

15.1. REPLACEMENT NOTES

15.1.1. General Notes

1. Use only original replacement parts:

   To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list.

2. **IMPORTANT SAFETY NOTICE**

   Components identified by the sign ⚠ have special characteristics important for safety. When replacing any of these components, use only the specified parts.

3. SPECIAL NOTE

   All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "ELECTROSTATICALLY SENSITIVE (ES) DEVICES" section of this service manual.

4. Parts with no Ref. No. in "EXPLODED VIEWS" are not supplied. And some Ref. No. will be skipped. Be sure to make your orders of replacement parts according to the parts list.
5. Parts different in shape or size may be used. However, only interchangeable parts will be supplied as service replacement parts.
6. Definition of Parts supplier:
   a. Parts with mark "PSEC" in the Remarks column are supplied from PSEC.
   b. Parts without mark in the Remarks column are supplied from PASC-NPC.
7. Item numbers with capital letter E (Example: E10, E20,...) in the Ref. No. column are shown in the exploded views.
8. Parts whose Ref. Nos. are the same are interchangeable as replacement parts. Any of these parts may be ordered and used as a replacement part.

15.1.2. Mechanical Replacement Notes

1. Section No. of parts shown in Exploded Views are indicated in the Remarks column.
2. Abbreviation

   RTL: Retention Time Limited

   This indicates that the retention time is limited for this item. After the discontinuation of this item in production, it will no longer be available.

3. After replacing the OPT/TV Unit, be sure to perform "ADJUSTMENT of the OPT/TV Unit." Refer to "WHEN INSTALLING THE OPT/TV UNIT INTO THE UNIT AT THE USER´S LOCATION"; in Adjustment Procedures 1.
4. The Infrared Remote Control Unit (Ref. No. 109) replacement part is available as a complete assembly unit only. Do not try to disassemble the Infrared Remote Control Unit.

15.1.3. Electrical Replacement Notes

1. Unless otherwise specified;

   All resistors are in Ω, K = 1,000 Ω, M = 1,000 kΩ.

2. Abbreviation

RTL:	Retention Time Limited This indicates that the retention time is limited for this item. After the discontinuation of this item in production, it will no longer be available.
NR:	Non Repairable Board Ass´y
MGF CHIP:	Metal Glaze Film Chip
C CHIP:	Ceramic Chip
COMPLX CMP:	Complex Component
W FLMPRF:	Wirewound Flameproof
C.B.A.:	Circuit Board Assembly
P.C.B.:	Printed Circuit Board
E.S.D.:	Electrostatically Sensitive Devices

3. When replacing 0 Ω resistor, a wire can be substituted for it.

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PT-56LCX70	A
PT-61LCX70	B
PT-50LCX7	C
PT-56LCX7	D
PT-61LCX7	E
PT-50LCX7K	F
PT-56LCX70-K	G
PT-61LCX70-K	H

15.2. MECHANICAL REPLACEMENT PARTS LIST

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PT-56LCX70	A
PT-61LCX70	B
PT-50LCX7	C
PT-56LCX7	D
PT-61LCX7	E
PT-50LCX7K	F
PT-56LCX70-K	G
PT-61LCX70-K	H

Definition of Parts supplier:

1. **Parts with mark "PSEC" in the Remarks column are supplied from PSEC.**
2. **Parts without mark in the Remarks column are supplied from PASC-NPC.**

MECHANICAL REPLACEMENT PARTS

Ref. No.	Part No.	Part Name & Description	Remarks
1	LSKU0053	BASE BODY	2
8	LSGH0082	FRONT JACK SHEET	2
9	LSYF0612	FRONT COVER UNIT (A,D,G)	1
9	LSYF0613	FRONT COVER UNIT (B,E,H)	1
9	LSYF0611	FRONT COVER UNIT (C,F)	1
10	TKK778377-1	CAUTION PANEL (F,G,H)	1
14	LSKW0263	ORNAMENT L (A,D,G)	1
14	LSKW0265	ORNAMENT L (B,E,H)	1
15	LSKW0269	ORNAMENT CENTER (A,B,D,E,G,H)	1
16	LSKW0270	ORNAMENT R (A,D,G)	1
16	LSKW0271	ORNAMENT R (B,E,H)	1
17	LSGV0141	REAR COVER	1
18	LSKG0112	SP PUNCHING SHEET (A,D,G)	1
18	LSKG0113	SP PUNCHING SHEET (B,E,H)	1
19	LSQL2324	FUSE LABEL	5
20	LSGQ0243	REAR FAN DUCT	1
22	LSYK2127	SCREEN UNIT (A,G)	3,4
22	LSYK2128	SCREEN UNIT (B,H)	3,4
22	LSYK2167	SCREEN UNIT (C)	3,4
22	LSYK2168	SCREEN UNIT (D)	3,4
22	LSYK2169	SCREEN UNIT (E)	3,4
22	LSYK2126	SCREEN UNIT (F)	3,4
30	LSYF0618	FRONT DOOR (A,B,D,E,G,H)	1
30	LSKF0688	FRONT DOOR (C,F)	1
31	EAS12D182A	SPEAKER	2
40	J0KG00000011	FILTER FOR EMI / EMC (CORES)	2
41	LSMC0160	PANEL SPRING	1
42	LSGU0735	OPERATION BUTTON	2
43	LSGL1516	POWER LED/IR PIECE (A,B,D,E,G,H)	1
43	LSGL1517	POWER LED/IR PIECE (C,F)	1
45	LSYF0619	POWER BUTTON UNIT (A,B,D,E,G,H)	1
45	LSGU0733	POWER BUTTON (C,F)	1
46	LSMA1010	SUPPORT SHIELD	1
47	LSMB0321	POWER BUTTON SPRING	1
48	LSXA0889-HB	OPT/TV UNIT (A,C,D,F,G)	1,5 PSEC
48	LSXA0870-HB	OPT/TV UNIT (B,E,H)	1,5 PSEC
50	LFS4000PA1	LAMP UNIT	6 ⚠ PSEC
51	LSYK2133	ESCUTCHEON SUB UNIT (A,G)	4
51	LSYK2134	ESCUTCHEON SUB UNIT (B,H)	4
51	LSYK2170	ESCUTCHEON SUB UNIT (C)	4
51	LSYK2171	ESCUTCHEON SUB UNIT (D)	4
51	LSYK2172	ESCUTCHEON SUB UNIT (E)	4
51	LSYK2132	ESCUTCHEON SUB UNIT (F)	4
52	LSGP0560	LENTICULAR SCREEN (A,D,G)	4
52	LSGP0562	LENTICULAR SCREEN (B,E,H)	4
52	LSGP0589	LENTICULAR SCREEN (C,F)	4
53	LSGP0559	FRESNEL LENS (A,D,G)	4
53	LSGP0561	FRESNEL LENS (B,E,H)	4
53	LSGP0588	FRESNEL LENS (C,F)	4
54	LSXA0886	SCREEN SUPPORT H UNIT	4
55	LSXA0887	SCREEN SUPPORT H UNIT (A,B,D,E,G,H)	4
55	LSXA0945	SCREEN SUPPORT V UNIT (C,F)	4
56	TBMA220	PANASONIC BADGE	4
57	LSGV0139	BACK COVER (A,D,G)	3
57	LSGV0140	BACK COVER (B,E,H)	3
57	LSGV0137	BACK COVER (C,F)	3
58	LSDL0311	MIRROR (A,D,G)	3
58	LSDL0312	MIRROR (B,E,H)	3
58	LSDL0411	MIRROR (C,F)	3
59	LSMA1011	LAMP BRACKET TOP	6
60	LSMA1017	LAMP BRACKET UNDER	6
61	LSYF0602	MIRROR HOLDER H UNIT (A,B,D,E,G,H)	3
61	LSYF0602	MIRROR HOLDER H UNIT (C,F)	3
62	LSYF0603	MIRROR HOLDER V UNIT	3
63	LSMA0991	RFP STAY PLATE	6
65	LSMF0499	SPACER (A,C,D,F,G)	3
65	LSMF0500	SPACER (B,E,H)	3
66	LSQL2173	LABEL (A,B,D,E,G,H)	4
68	LSMA1005	SCREEN SUPPORT CORNER (A,B,D,E,G,H)	4
72	LSMA1006	LAMP SUPPORT SHIELD	6
73	LSJA0641	AC CORD	5 ⚠
74	LSRF0016	BLOWER	6
83	TMM5439	CLAMPER	6 PSEC
101	LSPG2444	CARTON BOX (A,G)	7
101	LSPG2446	CARTON BOX (B,H)	7
101	LSPG2502	CARTON BOX (C)	7
101	LSPG2503	CARTON BOX (D)	7
101	LSPG2504	CARTON BOX (E)	7
101	LSPG2532	CARTON BOX (F)	7
102	LSPG2445	CARTON BOX BOTTOM (A,D,G)	7
102	LSPG2447	CARTON BOX BOTTOM (B,E,H)	7
102	LSPG2443	CARTON BOX BOTTOM (C,F)	7
103	LSPN0803	CUSHION TOP L	7
104	LSPN0804	CUSHION TOP R	7
105	LSPN0805	CUSHION BOTTOM L	7
106	LSPN0806	CUSHION BOTTOM R	7
107	LSPN0831	CUSHION BOTTOM CENTER	7
108	LSPF0111	BAG,POLYETHYLENE	7
109	N2QAYB000103	REMOTE CONTROL UNITS	7
111	LSQF1204	FAN BAG UNIT (A,B,C,D,E)	7
111	LSQF1246	FAN BAG UNIT (F,G,H)	7
112	LSPN0807	CUSHION SIDE L	7
113	LSPN0808	CUSHION SIDE R	7
114	LSPN0809	CUSHION BACK (A,D,G)	7
114	LSPN0810	CUSHION BACK (B,E,H)	7
205	LSSC0963	LAMP SHIELD CASE FRONT	5
206	LSSC0992-1	FAN SHIELD REAR	5
207	L6FAYYYH0053	DC FAN MOTORS	5 ⚠
208	KGLS-6S	CLAMPER	5
209	LSGQ0176	CLAMPER	5
213	LSMA1009	POWER P.C.B. SHIELD	5
214	LSMZ0426	BARRIER	5
215	LSJH0096	REAR JACK HOLDER	5
223	LSXK0303	RF AMP POWER SUPPLY P.C.B.NR	5 ⚠ PSEC
236	LSMF0367	SHEET,NYLON-RAYON	5

Ref. No.	Part No.	Part Name & Description	Remarks
237	LSJA0635	RF AMP-MAIN HARNESS	5
238	LSJA0636	RF AMP-RF POWER HARNESS	5
239	LSJA0639	THERMAL FUSE	5 ⚠
401	XTV4+16AFJ	TAPPING SCREW,STEEL	1,3
403	XTV3+8FFJK	SCREW	2
404	XTV3+30JFJ	TAPPING SCREW,STEEL	5
410	XYN4+J8FJ	SCREW W/WASHER,STEEL	6 PSEC
417	XYN3+K10FN	SCREW W/WASHER,STEEL	5
421	XTV3+8GFJ	TAPPING SCREW,STEEL	1
434	XYN3+F10FJ	SCREW,STEEL	5
452	XTV3+8FFJ	TAPPING SCREW,STEEL	2,5
453	XTV3+10JFJ	TAPPING SCREW,STEEL	5
454	XTV4+16AFJK	TAPPING SCREW,STEEL	1
465	XTV4+12AFJ	TAPPING SCREW,STEEL (A,B,D,E,G,H)	2,3,4
465	XTV4+12AFJ	TAPPING SCREW,STEEL (C,F)	2,3,4
478	LSHD0099-FJ	SCREW,STEEL	1
479	XYE3+FJ8FJ	SCREW W/WASHER,STEEL	5
482	XYN3+J8FJ	SCREW W/WASHER,STEEL	5,6 PSEC
493	XWA3BFN	SPRING WASHER	6
494	XVE3B20FN	SCREW W/WASHER,STEEL	6
710	LSMP0559-1	SD SHIELD CASE	2
711	LSMP0558	SD SUPPORT ANGLE	2
712	LSMC0161	SD EARTH SPRING	2
713	K1PY30Y00005	HDMI INTERNAL HARNESS	2
714	LSJA0629	SD-MAIN HARNESS	2
716	LSSC0978	HEAT SINK	5
721	EYF52BCY	FUSE HOLDER	5
724	LSSC0766	HEAT SINK	5
725	LSSC0996	ELECTROMAGNETIC WAVE ABSORPTION	5
726	LSSC0997	ELECTROMAGNETIC WAVE ABSORPTION	5
750	VZFS0006	CLAMPER	2
E20	LSEP3231A	FRONT JACK/OPERATION P.C.B.	2 RTL
E30	LSEP3232A	POWER SWITCH/OPERATION P.C.B.	2 RTL
E40	LSXA0885	SD/HDMI P.C.B.	2 RTL
E50	LSEP3237A	POWER P.C.B.	5 RTL
E60	LSEP3230A	REAR JACK P.C.B.	5 RTL
E70	LSEP3233A	TUNER P.C.B.	5 RTL

15.3. ELECTRICAL REPLACEMENT PARTS LIST

Definition of Parts supplier:

1. **All parts are supplied from PASE-NPC.**

PRINTED CIRCUIT BOARD ASSEMBLY

Ref. No.	Part No.	Part Name & Description	Remarks
E20	LSEP3231A	FRONT JACK/OPERATION P.C.B.	RTL
E30	LSEP3232A	POWER SWITCH/OPERATION P.C.B.	RTL
E40	LSXA0885	SD/HDMI P.C.B.	E.S.D. RTL
E50	LSEP3237A	POWER P.C.B.	RTL
E60	LSEP3230A	REAR JACK P.C.B.	RTL
E70	LSEP3233A	TUNER P.C.B.	RTL

15.3.1. FRONT JACK/OPERATION P.C.B.

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R6701	ERJ3EKF1741V	MGF CHIP 1/16W 1.74K	
R6702	ERJ3EKF1621V	MGF CHIP 1/16W 1.62K	
R6703	ERJ3EKF2321V	MGF CHIP 1/16W 2.32K	
R6704	ERJ3EKF3161V	MGF CHIP 1/16W 3.16K	
R6707	ERJ3GEYJ750V	MGF CHIP 1/16W 75	
R6708	ERJ3GEYJ184V	MGF CHIP 1/16W 180K	
R6709	ERJ3GEYJ184V	MGF CHIP 1/16W 180K	

PIN HEADER

Ref. No.	Part No.	Part Name & Description	Remarks
CN6701	K1KA08BA0061	CONNECTOR 8P	

SWITCHES

Ref. No.	Part No.	Part Name & Description	Remarks
SW6701	EVQ11G05R	SWITCH PUSH	
SW6702	EVQ11G05R	SWITCH PUSH	
SW6703	EVQ11G05R	SWITCH PUSH	
SW6704	EVQ11G05R	SWITCH PUSH	
SW6705	EVQ11G05R	SWITCH PUSH	

JACK

Ref. No.	Part No.	Part Name & Description	Remarks
JK6701	K2HA306A0037	JACKS FOR SMALL SIGNAL (EQUIPMENT SIDE)	

15.3.2. POWER SWITCH/OPERATION P.C.B.

TRANSISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
Q6801	2SD0601A0L	TRANSISTOR SI NPN CHIP	
or Q6801	B1ABCF000011	TRANSISTOR SI NPN CHIP	
or Q6801	B1ABCF000106	TRANSISTOR SI NPN CHIP	
Q6802	2SB1218A0L	TRANSISTOR SI PNP CHIP	
or Q6802	B1ADCF000063	TRANSISTOR SI PNP CHIP	
or Q6802	B1ADCF000075	TRANSISTOR SI PNP CHIP	
Q6803	2SB1218A0L	TRANSISTOR SI PNP CHIP	
or Q6803	B1ADCF000063	TRANSISTOR SI PNP CHIP	
or Q6803	B1ADCF000075	TRANSISTOR SI PNP CHIP	
Q6804	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q6804	B1ABCF000020	TRANSISTOR SI NPN CHIP	
or Q6804	B1ABCF000112	TRANSISTOR SI NPN CHIP	

DIODES

Ref. No.	Part No.	Part Name & Description	Remarks
D6802	B3AAA0000975	LIGHT EMITTING DIODE	
or D6802	B3AAA0000538	LIGHT EMITTING DIODE	
D6803	B3AGA0000072	LIGHT EMITTING DIODE GREEN	

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R6801	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R6802	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6804	ERJ3GEYJ181V	MGF CHIP 1/16W 180	
R6805	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6806	ERJ3GEYJ471V	MGF CHIP 1/16W 470	
R6807	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R6808	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6809	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6810	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6811	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6812	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6815	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6816	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	

CAPACITOR

Ref. No.	Part No.	Part Name & Description	Remarks
C6801	ECEA0JKA470	ELECTROLYTIC 6.3V 47UF	

PIN HEADER

Ref. No.	Part No.	Part Name & Description	Remarks
CN6801	K1KA08BA0061	CONNECTOR 8P	

SWITCH

Ref. No.	Part No.	Part Name & Description	Remarks
SW6801	EVQ11G05R	SWITCH PUSH	

MISCELLANEOUS

Ref. No.	Part No.	Part Name & Description	Remarks
RM6801	B3RAD0000143	INFRARED RECEIVER	

15.3.3. SD/HDMI P.C.B.

INTEGRATED CIRCUITS

Ref. No.	Part No.	Part Name & Description	Remarks
IC9801	C1AB00002641	IC, LINEAR	
IC9802	LSSK0114	IC, EEP ROM	E.S.D.

TRANSISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
Q9801	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q9801	B1ABCF000020	TRANSISTOR SI NPN CHIP	
or Q9801	B1ABCF000112	TRANSISTOR SI NPN CHIP	
Q9802	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q9802	B1ABCF000020	TRANSISTOR SI NPN CHIP	
or Q9802	B1ABCF000112	TRANSISTOR SI NPN CHIP	
Q9804	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q9804	B1ABCF000020	TRANSISTOR SI NPN CHIP	
or Q9804	B1ABCF000112	TRANSISTOR SI NPN CHIP	

DIODES

Ref. No.	Part No.	Part Name & Description	Remarks
D9801	EZAEG2A50AX	OTHER FILTERS	
D9802	EZAEG2A50AX	OTHER FILTERS	
D9803	EZAEG2A50AX	OTHER FILTERS	
D9804	EZAEG2A50AX	OTHER FILTERS	
D9805	EZAEG2A50AX	OTHER FILTERS	
D9806	EZAEG2A50AX	OTHER FILTERS	
D9807	EZAEG2A50AX	OTHER FILTERS	
D9808	EZAEG2A50AX	OTHER FILTERS	
D9809	EZAEG2A50AX	OTHER FILTERS	
D9810	EZAEG2A50AX	OTHER FILTERS	
D9811	EZAEG2A50AX	OTHER FILTERS	
D9812	MAZ80560ML	DIODE ZENER CHIP 5.6V	
D9813	MA22F2000L	SMALL CAPACITY SILICON RECTIFIER DIODES	
D9814	MA22F2000L	SMALL CAPACITY SILICON RECTIFIER DIODES	

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R9801	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R9802	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R9803	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R9804	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R9805	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R9806	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R9807	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R9808	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R9811	ERJ3EKF4701V	MGF CHIP 1/16W 4.7K	
R9812	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R9813	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R9814	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R9815	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R9816	ERJ3GEYJ560V	MGF CHIP 1/16W 56	
R9818	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R9821	ERJ3GEYJ390V	MGF CHIP 1/16W 39	
R9822	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R9823	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R9824	ERJ3GEYJ3R9V	MGF CHIP 1/16W 3.9	
R9825	ERJ3GEYJ3R9V	MGF CHIP 1/16W 3.9	
R9826	ERJ3GEYJ3R9V	MGF CHIP 1/16W 3.9	
R9827	ERJ3GEYJ3R9V	MGF CHIP 1/16W 3.9	
R9828	ERJ3GEYJ3R9V	MGF CHIP 1/16W 3.9	
R9829	ERJ3GEYJ3R9V	MGF CHIP 1/16W 3.9	
R9830	ERJ3GEYJ3R9V	MGF CHIP 1/16W 3.9	
R9831	ERJ3GEYJ3R9V	MGF CHIP 1/16W 3.9	
R9832	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R9840	ERJ3GEYJ560V	MGF CHIP 1/16W 56	
R9841	ERJ3GEYJ560V	MGF CHIP 1/16W 56	
R9850	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R9851	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R9852	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R9853	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R9854	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R9855	ERJ3GEYJ181V	MGF CHIP 1/16W 180	
R9856	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R9857	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R9858	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R9859	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R9860	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R9861	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R9862	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
R9863	ERJ3GEYJ181V	MGF CHIP 1/16W 180	
R9864	ERJ3GEYJ181V	MGF CHIP 1/16W 180	
R9865	ERJ3GEYJ181V	MGF CHIP 1/16W 180	
R9866	ERJ3GEYJ181V	MGF CHIP 1/16W 180	
R9867	ERJ3GEYJ181V	MGF CHIP 1/16W 180	
R9876	ECJ1VC1H470J	C CHIP 50V 47PF	
R9878	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R9879	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R9880	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R9881	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R9882	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R9888	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R9889	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R9896	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R9897	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R9898	ERJ3GEY0R00V	MGF CHIP 1/16W 0	

CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C9801	F1H1E104A030	C CHIP 25V 0.1UF	
C9802	F1H1E104A030	C CHIP 25V 0.1UF	
C9805	F2G0J2200006	ELECTROLYTIC CHIP 6.3V 22UF	
C9806	F1H1E104A030	C CHIP 25V 0.1UF	
C9807	F1H1C104A065	C CHIP 16V 0.1UF	
C9808	F1H1C104A065	C CHIP 16V 0.1UF	
C9809	F1H1C104A065	C CHIP 16V 0.1UF	
C9810	F1H1C104A065	C CHIP 16V 0.1UF	
C9811	F1H1C104A065	C CHIP 16V 0.1UF	
C9812	F1H1C104A065	C CHIP 16V 0.1UF	
C9813	F1J1A106A024	C CHIP 10V 10UF	
C9814	F1H1C104A065	C CHIP 16V 0.1UF	
C9815	ECJ1VB1H103K	C CHIP 50V 0.01UF	
C9816	ECJ1VB1H103K	C CHIP 50V 0.01UF	
C9817	ECJ1VB1H103K	C CHIP 50V 0.01UF	
C9818	ECJ1VB1H103K	C CHIP 50V 0.01UF	
C9819	ECJ1VB1H103K	C CHIP 50V 0.01UF	
C9820	ECJ1VB1H103K	C CHIP 50V 0.01UF	
C9830	EEE0JA470SR	ELECTROLYTIC 6.3V 47UF	
C9831	F1H1C104A008	C CHIP 16V 0.1UF	

COILS

Ref. No.	Part No.	Part Name & Description	Remarks
L9801	J0JHC0000045	EMI FILTER CHIP	
L9804	J0JHC0000045	EMI FILTER CHIP	
L9805	J0JHC0000045	EMI FILTER CHIP	
L9806	J0JHC0000031	EMI FILTER CHIP	
L9807	J0JHC0000031	EMI FILTER CHIP	
L9809	J0JHC0000031	EMI FILTER CHIP	

PIN HEADERS

Ref. No.	Part No.	Part Name & Description	Remarks
CN9801	K1NA09E00078	SD UNIT	
CN9802	K1KA12AA0105	CONNECTOR 12P	
CN9803	K1FA119E0002	HDMI JACK SOCKET	
CN9804	K1KA30AA0009	CONNECTOR 30P	

MISCELLANEOUS

Ref. No.	Part No.	Part Name & Description	Remarks
403	XTV3+8FFJK	SCREW	
452	XTV3+8FFJ	TAPPING SCREW,STEEL	
710	LSMP0559-1	SD SHIELD CASE	
711	LSMP0558	SD SUPPORT ANGLE	
712	LSMC0161	SD EARTH SPRING	
713	K1PY30Y00005	HDMI INTERNAL HARNESS	
714	LSJA0629	SD-MAIN HARNESS	

15.3.4. POWER P.C.B.

INTEGRATED CIRCUITS

Ref. No.	Part No.	Part Name & Description	Remarks
IC1001	C0DACYY00003	IC, LINEAR	⚠
IC1002	CNC1S101R1KT	IC, LINEAR	⚠
IC1003	C0DAEZZ00003	IC, LINEAR	

TRANSISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
Q801	2SD1819AHL	TRANSISTOR SI NPN CHIP	
Q803	2SD1819AHL	TRANSISTOR SI NPN CHIP	
Q804	2SD1819AHL	TRANSISTOR SI NPN CHIP	
Q805	2SD1819AHL	TRANSISTOR SI NPN CHIP	
Q806	2SD1819AHL	TRANSISTOR SI NPN CHIP	
Q1001	B1AAGD000016	TRANSISTOR SI NPN	

DIODES

Ref. No.	Part No.	Part Name & Description	Remarks
D801	ERZV10V361CS	SURGE ABSORBER 360V	⚠
D802	B0EDKT000009	DIODE SI CHIP	
D807	B0HAJL000001	DIODE SI	
D808	B0HAJL000001	DIODE SI	
D809	B0EAKP000012	DIODE SI	
D811	MA3X152E0L	DIODE SI CHIP	
D814	MAZ42700MF	DIODE ZENER 27V	
D852	B0EAKP000012	DIODE SI	
D1001	B0EBNT000008	DIODE SI	⚠
D1002	MAZ71200BC	DIODE ZENER 12V	
D1003	B0HAJL000001	DIODE SI	
D1004	MAZ73000BC	DIODE ZENER 300V	
D1006	B0EAKV000052	DIODE SI	
D1007	B0HAJL000001	DIODE SI	
D1008	B0JCME000041	DIODE SI CHIP	
D1009	MAZ40910HF	DIODE ZENER 9.4V	
D1010	B0JBSK000017	DIODE SI	
D1011	B0JBSK000017	DIODE SI	
D1012	B0HAJL000001	DIODE SI	
D1015	MAZ41600MF	DIODE ZENER 16V	
D1016	MAZ41300MF	DIODE ZENER 13V	
D1017	MAZ43000MF	DIODE ZENER 30V	
D1018	B0JCMK000003	DIODE SI CHIP	

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R801	D0AF825KA002	SOLID 1/2W 8.2M	⚠
R806	ERDS1TJ100T	CARBON 1/2W 10	
R807	ERJ6GEYJ562V	MGF CHIP 1/10W 5.6K	
R808	ERJ6GEYJ272V	MGF CHIP 1/10W 2.7K	
R811	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R812	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R813	ERA3YED222V	MGF CHIP1/16W 2.2K	
R818	ERJ6ENF1502V	MGF CHIP 1/10W 15K	
R820	ERJ6GEYJ104V	MGF CHIP 1/10W 100K	
R821	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R822	ERJ6GEYJ104V	MGF CHIP 1/10W 100K	
R823	ERJ6ENF1502V	MGF CHIP 1/10W 15K	
R826	ERJ6GEYJ272V	MGF CHIP 1/10W 2.7K	
R827	ERJ6GEYJ562V	MGF CHIP 1/10W 5.6K	
R1001	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R1005	ERJ6ENF3901V	MGF CHIP 1/10W 39K	
R1006	ERX2SZJR12P	METAL FILM CHIP 2W 0.12	
R1007	ERJ6ENF3901V	CARBON CHIP METAL GLAZE	
R1008	ERJ6GEYJ562V	MGF CHIP 1/10W 5.6K	
R1009	ERDS1TJ330T	CARBON 1/2W 33	
R1010	ERJ6ENF1802V	MGF CHIP 1/10W 18K	
R1011	ERD25FJ100P	CARBON 1/4W 10	⚠
R1012	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R1013	ERJ6GEYJ152V	MGF CHIP 1/10W 1.5K	
R1014	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R1016	ERDS2TJ392	CARBON 1/4W 3.9K	
R1017	ERA3YED561V	MGF CHIP 1/16W 560	
R1018	ERA3YED752V	MGF CHIP 1/16W 7.5K	
R1019	ERA3YED302V	MGF CHIP 1/16W 3K	
R1021	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
R1022	ERDS1TJ151T	CARBON 1/2W 150	
R1023	ERDS2TJ153	CARBON 1/4W 15K	
R1024	ERDS2TJ562T	CARBON 1/4W 5.6K	
R1025	ERJ6ENF3300V	MGF CHIP 1/10W 330	
R1026	ERF7ZKR82	W FLMPRF 7W 0.82	⚠
R1027	ERDS2TJ562T	CARBON 1/4W 5.6K	
R1032	ERJ3GEY0R00V	MGF CHIP 1/16W 0	

CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C801	F1BAF102A087	CERAMIC 250V 1000UF	⚠
C802	F0CAF105A021	POLYESTER 3.5V 1UF	⚠
C804	ECA1CHG102B	ELECTROLYTIC 16V 1000UF	
C805	ECA1EHG102B	ELECTROLYTIC 25V 1000UF	
C806	F0CAF105A021	POLYESTER 3.5V 1UF	⚠
C807	F1BAF102A087	CERAMIC 250V 1000UF	⚠
C815	ECA1CM100B	ELECTROLYTIC 16V 10UF	
C851	F0CAF474A021	POLYESTER 3.5V 0.47UF	⚠
C1001	F0CAF104A021	POLYESTER 125V 0.1UF	⚠

Ref. No.	Part No.	Part Name & Description	Remarks
C1002	ECEC2DP561BB	ELECTROLYTIC 200V 560UF	⚠
C1003	F1BAF102A087	CERAMIC 250V 1000UF	⚠
C1004	ECJ1VB1H104K	C CHIP 50V 0.1UF	
C1005	ECJ1VC1H101J	C CHIP 50V 100PF	
C1008	ECJ2VB1H222K	C CHIP 50V 0.0022UF	
C1009	F1B3D222A010	CERAMIC 25V 2200PF	
C1010	F2A1V1010029	ELECTROLYTIC 35V 100UF	
C1011	ECJ2VB1H102K	C CHIP 50V 1000PF	
C1015	F2A1V331A800	ELECTROLYTIC 35V 330UF	
C1016	ECA1HHG470B	ELECTROLYTIC 50V 47UF	
C1017	F1H1A105A025	C CHIP 10V 1UF	
C1018	F2A1C3920011	ELECTROLYTIC 16V 3900UF	
C1019	F2A1C3920011	ELECTROLYTIC 16V 3900UF	
C1022	ECEA1HKAR47	ELECTROLYTIC 50V 0.47UF	
C1023	ECJ1VB1H104K	C CHIP 50V 0.1UF	
C1025	F2A1V331A800	ELECTROLYTIC 35V 330UF	
C1026	ECJ1VB1H104K	C CHIP 50V 0.1UF	
C1027	ECJ1VB1H104K	C CHIP 50V 0.1UF	
C1028	ECJ1VB1H104K	C CHIP 50V 0.1UF	
C1029	ECJ1VB1H104K	C CHIP 50V 0.1UF	
C1030	ECJ1VB1H104K	C CHIP 50V 0.1UF	
C1031	ECJ1VB1H104K	C CHIP 50V 0.1UF	
C1035	F2A1E3310040	ELECTROLYTIC 25V 330UF	

COILS

Ref. No.	Part No.	Part Name & Description	Remarks
L802	G0B452L00001	COMMON-MODE LINE CHOKE COILS	⚠
L1001	G0B123K00004	LINE FILTER	⚠
L1003	J0JKA0000015	FERRITE BEAD WITH LEAD	
L1004	J0JHB0000021	EMI FILTER CHIP	
L1007	J0JHC0000031	EMI FILTER CHIP	
L1009	J0JHC0000031	EMI FILTER CHIP	
L1010	J0JHC0000031	EMI FILTER CHIP	
L1011	J0JHC0000031	EMI FILTER CHIP	
L1012	J0JHC0000031	EMI FILTER CHIP	
L1013	J0JHC0000031	EMI FILTER CHIP	
L1014	J0JHC0000031	EMI FILTER CHIP	
L1015	J0JHC0000031	EMI FILTER CHIP	

PIN HEADERS

Ref. No.	Part No.	Part Name & Description	Remarks
CN804	K1KA02A00736	CONNECTOR 2P	
CN851	LSJA0644	POWER-RF POWER HARNESS	
CN1003	LSJA0645	POWER-MAIN HARNESS	

FUSE & PROTECTOR

Ref. No.	Part No.	Part Name & Description	Remarks
F801	K5D802AQ0004	FUSES, CAP TERMINAL TYPE	⚠
F1001	K5D632AQ0002	TRANSFORMER 125V 6.3A	⚠
PR1001	D4FA7R00A002	IC PROTECTOR 7A	⚠

RELAY

Ref. No.	Part No.	Part Name & Description	Remarks
RL801	K6B1CGA00055	MAGNET RELAYS (FOR PCB)	⚠
RL802	K6B1CGA00055	MAGNET RELAYS (FOR PCB)	⚠

TRANSFORMER

Ref. No.	Part No.	Part Name & Description	Remarks
T801	G4C2AAD00008	POWER SUPPLY TRANSFORMERS	⚠
T1001	G4D3A0000195	TRANSFORMER SWITCHING	⚠

MISCELLANEOUS

Ref. No.	Part No.	Part Name & Description	Remarks
417	XYN3+K10FN	SCREW W/WASHER,STEEL	
434	XYN3+F10FJ	SCREW,STEEL	
716	LSSC0978	HEAT SINK	
721	EYF52BCY	FUSE HOLDER	
724	LSSC0766	HEAT SINK	

15.3.5. REAR JACK P.C.B.

INTEGRATED CIRCUITS

Ref. No.	Part No.	Part Name & Description	Remarks
IC2751	C0DBEKG00003	IC, LINEAR	
IC2753	C0DBEKG00003	IC, LINEAR	
IC2754	C0DBEKG00003	IC, LINEAR	
IC2756	C0BBBA000022	IC, LINEAR	
IC4101	AN15862A-VT	ICS FOR VIDEO / AUDIO	

TRANSISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
Q2751	2SD1819AHL	TRANSISTOR SI NPN CHIP	
or Q2751	B1ABCF000020	TRANSISTOR SI NPN CHIP	
or Q2751	B1ABCF000112	TRANSISTOR SI NPN CHIP	
Q2752	2SD1819AHL	TRANSISTOR SI NPN CHIP	
or Q2752	B1ABCF000020	TRANSISTOR SI NPN CHIP	
or Q2752	B1ABCF000112	TRANSISTOR SI NPN CHIP	
Q2753	2SD1819AHL	TRANSISTOR SI NPN CHIP	
or Q2753	B1ABCF000020	TRANSISTOR SI NPN CHIP	
or Q2753	B1ABCF000112	TRANSISTOR SI NPN CHIP	
Q2754	2SD1819AHL	TRANSISTOR SI NPN CHIP	
or Q2754	B1ABCF000020	TRANSISTOR SI NPN CHIP	
or Q2754	B1ABCF000112	TRANSISTOR SI NPN CHIP	
Q2755	2SD0601A0L	TRANSISTOR SI NPN CHIP	
or Q2755	B1ABCF000011	TRANSISTOR SI NPN CHIP	
or Q2755	B1ABCF000106	TRANSISTOR SI NPN CHIP	
Q4101	2SB0709A0L	TRANSISTOR SI PNP CHIP	
Q4102	2SD0601A0L	TRANSISTOR SI NPN CHIP	
or Q4102	B1ABCF000011	TRANSISTOR SI NPN CHIP	
or Q4102	B1ABCF000106	TRANSISTOR SI NPN CHIP	
Q4103	2SD0601A0L	TRANSISTOR SI NPN CHIP	
or Q4103	B1ABCF000011	TRANSISTOR SI NPN CHIP	
or Q4103	B1ABCF000106	TRANSISTOR SI NPN CHIP	

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R2753	ERJ3GEYJ563V	MGF CHIP 1/16W 56K	
R2754	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2755	ERJ3GEYJ563V	MGF CHIP 1/16W 56K	
R2756	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R2757	ERJ3GEYJ563V	MGF CHIP 1/16W 56K	
R2758	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R2759	ERJ3GEYJ563V	MGF CHIP 1/16W 56K	
R2760	ERJ3GEYJ182V	MGF CHIP 1/16W 1.8K	
R2761	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2762	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2763	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2764	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2768	ERA3YKD104V	MGF CHIP 1/16W 100K	
R2769	ERA3YED273V	MGF CHIP 1/16W 27K	
R2770	ERA3YKD124V	MGF CHIP 1/16W 120K	
R2771	ERA3YED273V	MGF CHIP 1/16W 27K	
R2774	ERJ3GEYJ274V	MGF CHIP 1/16W 270K	
R2776	ERJ3GEYJ682V	MGF CHIP 1/16W 6.8K	
R2777	ERA3YKD124V	MGF CHIP 1/16W 120K	
R2778	ERA3YED273V	MGF CHIP 1/16W 27K	
R2779	ERJ3GEYJ563V	MGF CHIP 1/16W 56K	
R2780	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R2781	ERJ3GEYJ563V	MGF CHIP 1/16W 56K	
R2782	ERJ3GEYJ563V	MGF CHIP 1/16W 56K	
R2783	ERJ3GEYJ153V	MGF CHIP 1/16W 15K	

Ref. No.	Part No.	Part Name & Description	Remarks
R2784	ERJ3GEYJ183V	MGF CHIP 1/16W 18K	
R2785	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R2786	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R2787	ERJ3GEYJ274V	MGF CHIP 1/16W 270K	
R2788	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R2789	ERJ3GEYJ154V	MGF CHIP 1/16W 150K	
R2790	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R3501	ERJ3GEYJ750V	MGF CHIP 1/16W 75	
R3502	ERJ3GEYJ750V	MGF CHIP 1/16W 75	
R3503	ERJ3GEYJ750V	MGF CHIP 1/16W 75	
R3504	ERJ3GEYJ184V	MGF CHIP 1/16W 180K	
R3505	ERJ3GEYJ184V	MGF CHIP 1/16W 180K	
R3506	ERJ3GEYJ750V	MGF CHIP 1/16W 75	
R3507	ERJ3GEYJ184V	MGF CHIP 1/16W 180K	
R3508	ERJ3GEYJ184V	MGF CHIP 1/16W 180K	
R3510	ERJ3EKF75R0V	MGF CHIP 1/16W 75	
R3511	ERJ3EKF75R0V	MGF CHIP 1/16W 75	
R3512	ERJ3EKF75R0V	MGF CHIP 1/16W 75	
R3513	ERJ3GEYJ184V	MGF CHIP 1/16W 180K	
R3514	ERJ3GEYJ184V	MGF CHIP 1/16W 180K	
R3515	ERJ3EKF75R0V	MGF CHIP 1/16W 75	
R3516	ERJ3EKF75R0V	MGF CHIP 1/16W 75	
R3517	ERJ3EKF75R0V	MGF CHIP 1/16W 75	
R3518	ERJ3GEYJ184V	MGF CHIP 1/16W 180K	
R3519	ERJ3GEYJ184V	MGF CHIP 1/16W 180K	
R3521	ERJ3GEYJ184V	MGF CHIP 1/16W 180K	
R3522	ERJ3GEYJ184V	MGF CHIP 1/16W 180K	
R4103	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4104	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4106	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4107	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4108	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4109	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4110	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4111	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4112	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4113	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4114	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4115	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4116	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4117	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4120	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4121	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4122	ERJ3GEYJ104V	MGF CHIP 1/16W 100K	
R4123	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R4124	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R4125	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4126	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4134	ERJ3GEYJ823V	MGF CHIP 1/16W 82K	
R4135	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R4136	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R4137	ERJ3GEYJ104V	MGF CHIP 1/16W 100K	
R4139	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4140	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4141	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R4142	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R4143	ERJ3GEYJ274V	MGF CHIP 1/16W 270K	
R4144	ERJ3GEYJ105V	MGF CHIP 1/16W 1M	
R4145	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R4146	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R4147	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R4148	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R4149	ERJ6GEYJ184V	MGF CHIP 1/10W 180K	
R4150	ERJ6GEYJ184V	MGF CHIP 1/10W 180K	

CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C2753	F1H1E104A030	C CHIP 25V 0.1UF	
C2754	F1H1E104A030	C CHIP 25V 0.1UF	
C2755	F1H1E104A030	C CHIP 25V 0.1UF	
C2756	F1H1E104A030	C CHIP 25V 0.1UF	
C2757	F1H1E104A030	C CHIP 25V 0.1UF	
C2758	F1H1E104A030	C CHIP 25V 0.1UF	
C2759	F1H1E104A030	C CHIP 25V 0.1UF	
C2760	F1H1E104A030	C CHIP 25V 0.1UF	
C2761	ECA1HHG470B	ELECTROLYTIC 50V 47UF	
C2765	ECA1HHG470B	ELECTROLYTIC 50V 47UF	
C2769	ECA1HHG470B	ELECTROLYTIC 50V 47UF	
C2774	ECA1HHG470B	ELECTROLYTIC 50V 47UF	
C2775	ECA1HHG470B	ELECTROLYTIC 50V 47UF	
C2776	ECA1HHG470B	ELECTROLYTIC 50V 47UF	
C3505	F2A1A4710030	ELECTROLYTIC 10V 470UF	
C4101	ECEA1CKA101	ELECTROLYTIC 16V 100UF	
C4103	F1H1A105A025	C CHIP 10V 1UF	
C4104	F1H1A105A025	C CHIP 10V 1UF	
C4105	F1H1E104A030	C CHIP 25V 0.1UF	
C4106	F1H1A105A025	C CHIP 10V 1UF	
C4107	F1H1A105A025	C CHIP 10V 1UF	
C4108	F1H1A105A025	C CHIP 10V 1UF	
C4109	F1H1A105A025	C CHIP 10V 1UF	
C4110	F1H1A105A025	C CHIP 10V 1UF	
C4111	F1H1A105A025	C CHIP 10V 1UF	
C4112	F1H1A105A025	C CHIP 10V 1UF	
C4113	F1H1A105A025	C CHIP 10V 1UF	
C4114	F1H1A105A025	C CHIP 10V 1UF	
C4115	F1H1A105A025	C CHIP 10V 1UF	
C4116	F1H1A105A025	C CHIP 10V 1UF	
C4117	F1H1A105A025	C CHIP 10V 1UF	
C4120	F1H1A105A025	C CHIP 10V 1UF	
C4121	F1H1A105A025	C CHIP 10V 1UF	
C4123	F1H1A105A025	C CHIP 10V 1UF	
C4124	F1H1A105A025	C CHIP 10V 1UF	
C4138	ECEA1CKA220	ELECTROLYTIC 16V 22UF	
C4139	F1H1A105A025	C CHIP 10V 1UF	
C4140	F1H1A105A025	C CHIP 10V 1UF	
C4141	F1J1A106A024	C CHIP 10V 10UF	

COIL

Ref. No.	Part No.	Part Name & Description	Remarks
L4101	J0JHC0000078	EMI FILTER CHIP	

PIN HEADERS

Ref. No.	Part No.	Part Name & Description	Remarks
CN2751	K1KA03AA0193	CONNECTOR 3P	
CN2752	K1KA03AA0193	CONNECTOR 3P	
CN2753	K1KA03AA0226	CONNECTOR 3P	
CN2754	K1KA03AA0225	CONNECTOR 3P	
CN3501	K1KA35BA0138	CONNECTOR 35P	
CN3502	K1KA06BA0061	CONNECTOR 6P	

JACKS

Ref. No.	Part No.	Part Name & Description	Remarks
JK3501	K1U413A00008	S-JACK SOCKET	
JK3502	K2HA306A0037	JACKS FOR SMALL SIGNAL (EQUIPMENT SIDE)	
JK3503	K2HA306A0037	JACKS FOR SMALL SIGNAL (EQUIPMENT SIDE)	
JK3504	K2HA306A0038	JACKS FOR SMALL SIGNAL (EQUIPMENT SIDE)	
JK3505	K2HA204A0051	JACKS FOR SMALL SIGNAL (EQUIPMENT SIDE)	
JK3506	K2HA306A0038	JACKS FOR SMALL SIGNAL (EQUIPMENT SIDE)	
JK3507	K2HA204A0051	JACKS FOR SMALL SIGNAL (EQUIPMENT SIDE)	
JK3509	K2HA204A0051	JACKS FOR SMALL SIGNAL (EQUIPMENT SIDE)	

15.3.6. TUNER P.C.B.

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R8970	ERJ6GEYJ470V	MGF CHIP 1/10W 47	
R8971	ERJ6GEYJ470V	MGF CHIP 1/10W 47	
R8972	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	

Ref. No.	Part No.	Part Name & Description	Remarks
R8973	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8974	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
W8972	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
W8973	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
W8974	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
W8975	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
W8976	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
W8977	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
W8978	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
W8979	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
W8980	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
W8981	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
W8982	ERJ6GEY0R00V	MGF CHIP 1/10W 0	

CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C8970	F2A0J331B003	ELECTROLYTIC 6.3V 330UF	
C8971	F1H1C104A065	C CHIP 16V 0.1UF	
C8972	F1H1H102A219	C CHIP 50V 1000PF	
C8973	F2A0J331B003	ELECTROLYTIC 6.3V 330UF	
C8974	F1H1C104A065	C CHIP 16V 0.1UF	
C8975	ECJ1VB1H103K	C CHIP 50V 0.01UF	
C8976	F2A1H560B358	ELECTROLYTIC 50V 56UF	
C8977	ECJ1VC1H820J	C CHIP 50V 82PF	
C8978	ECJ1VC1H820J	C CHIP 50V 82PF	
C8979	ECJ1VC1H100C	C CHIP 50V 10PF	
C8980	F2A0J331B003	ELECTROLYTIC 6.3V 330UF	
C8981	F1H1C104A065	C CHIP 16V 0.1UF	
C8982	F1H1H102A219	C CHIP 50V 1000PF	
C8984	ECJ1VC1H101J	C CHIP 50V 100PF	

COILS

Ref. No.	Part No.	Part Name & Description	Remarks
L8970	J0JHC0000045	EMI FILTER CHIP	
L8971	J0JHC0000034	EMI FILTER CHIP	
L8972	J0JHC0000045	EMI FILTER CHIP	
L8973	J0JHC0000045	EMI FILTER CHIP	

PINHEADER

Ref. No.	Part No.	Part Name & Description	Remarks
CN8970	K1KA20A00331	CONNECTOR 20P	

MISCELLANEOUS

Ref. No.	Part No.	Part Name & Description	Remarks
TU8970	ENGE6601KF	TV TUNERS	
725	LSSC0996	ELECTROMAGNETIC WAVE ABSORPTION	
726	LSSC0997	ELECTROMAGNETIC WAVE ABSORPTION	